

Technical Report 1315

**Dissecting Situational Strength:
Theoretical Analysis and Empirical Tests**

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DISSECTING SITUATIONAL STRENGTH: THEORETICAL ANALYSIS AND EMPIRICAL TESTS

EXECUTIVE SUMMARY

Research Requirement:

Social scientists have long argued that the accurate prediction of human behavior requires a thorough understanding of relevant characteristics of individuals (e.g., personality, intelligence, values) as well as a thorough understanding of the situations people experience. However, research dedicated to understanding situations is not as advanced as the research dedicated to understanding individual characteristics. The current research is designed to increase researchers' understanding of situational forces. We argue that "situational strength" (i.e., implicit or explicit cues provided by external entities regarding the desirability of potential behavior) is one of the most important characteristics of situations, and should be studied and applied in a more scientifically rigorous manner.

This research has profound implications for the U.S. Army because, according to recent Army Posture Statements, the changing nature of the Army's role and structure requires Soldiers to operate in environments that are more ambiguous and fluid, and that require more personal discretion, than has historically been the case. As these situational characteristics continue to change, previous conclusions and assumptions about likely Soldier behavior may no longer be valid. Thus, in order to better predict and understand the ways in which Soldiers will behave, our models must continue to evolve alongside the changing nature of modern warfare. The current research articulates the theory, evidence, and research tools necessary to facilitate this development.

Procedure:

The multi-phase undertaking described in this report utilized more than 1,600 participants, representing a variety of occupations and backgrounds. Project One was dedicated to developing a standardized measure of situational strength and using it to test specific, theoretically grounded hypotheses about behavioral differences across strong versus weak situations. Here, a rigorous instrument development process was utilized and theoretically-driven hypotheses were tested using correlational analyses and moderated multiple regression. Project Two built upon Project One by examining the negative effects of working in an environment that provides more or less situational strength than one prefers. Resultant data require special analytical attention, so all conclusions were based on state-of-the-art data-analytic techniques (namely, polynomial regression and response surface methods).

Findings:

Findings from Project One suggest that the Situational Strength at Work scale conforms to the predicted four-factor structure, shows strong measurement properties, and generally performs as predicted. Moreover, consistent with the theoretical perspective that drove this

project, including situational strength in our models improved the extent to which behavior was predicted by personality.

Findings from Project Two suggest that, when measured directly, differences between preferred versus perceived levels of situational strength have deleterious effects on job satisfaction, organizational commitment, and intent to quit. When measured indirectly, however, these results were less pronounced. Further, as hypothesized, employees had different responses to different types of misfit (i.e., inadequate supplies versus excess supplies).

In sum, these findings support the notion that situational strength has the potential to improve our understanding and prediction of human behavior in the workplace and beyond.

Utilization and Dissemination of Findings:

The empirical and scientific products outlined in this report have been (and/or will be) used in a variety of ways. First, the Situational Strength at Work scale has the potential to be used in continued scientific efforts to assess the impact of situational strength on behavior in occupational settings. Second, this scale has the potential to serve as a framework for related measures of situational strength (e.g., situational strength in the military, situational strength in health settings) that can be used to better understand behavior in other domains of life. Third, an abbreviated version of Project One was presented at the 2010 meeting of the Society for Industrial and Organizational Psychology in Atlanta, GA. Fourth, Project One recently received a “revise and resubmit” decision at the *Journal of Management* (ISI Impact Factor = 4.43). Fifth, an abbreviated version of Project Two was included in a symposium proposal for the 2011 Academy of Management conference in San Antonio, TX. Sixth, Project Two will likely be submitted to a top organizational science journal in the next several months.

DISSECTING SITUATIONAL STRENGTH: THEORETICAL ANALYSIS AND EMPIRICAL TESTS

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Chapter 1 Introduction

“[W]e are developing qualities in our leaders, our people, our forces...that will enable them to operate effectively amidst uncertainty and unpredictability” (2007 Army Posture Statement; Harvey & Schoomaker, 2007, p. i)

A core assumption of many social science disciplines and theories is that human behavior is ultimately a function of dispositional forces, situational forces, and their interaction (Cronbach, 1957; Endler, 1993; Mischel, 1977; Mischel & Shoda, 1995; Weiss & Adler, 1984). Although little consensus exists vis-à-vis the taxonomic structure and psychological impact of situations (cf. Chatman, 1989; Endler, 1993; Frederiksen, 1972; Funder, 2006; Hatstrup & Jackson, 1996; Johns, 2006), some researchers have argued that the single most important aspect of situations to consider is their “strength” (Snyder & Ickes, 1985).

Situational strength is typically conceptualized as a general force that homogenizes enacted behaviors, thereby restricting the expression and predictive validity of dispositions (Forehand & von Haller Gilmer, 1964; Hatstrup & Jackson, 1996; James, Demaree, Mulaik, & Ladd, 1992; Mischel, 1977; Mullins & Cummings, 1999; Snyder & Ickes, 1985; Weiss & Adler, 1984). In “strong” situations, the most appropriate course of action is clear. Hence, the effects of each person’s unique individual-differences profile are minimized because situational characteristics effectively cause a shift in focus from individual tendencies to information provided by the situation (Snyder & Ickes, 1985). In “weak” situations, in contrast, the most appropriate course of action is not at all clear. Hence, the effects of each person’s unique individual-differences profile are maximized. Stated differently, dispositional forces should predict behavior in weak situations, but not in strong situations.

The classic example of a strong situation is a red traffic light. Here, behavioral variability is low because the most appropriate course of action (namely, to stop one’s vehicle) is so well defined that it overrides most people’s natural tendencies. Conversely, a yellow traffic light is a relatively weak situation because appropriate behaviors are less well defined and norms are inconsistent. Thus, individuals who are more daring are likely to speed through the intersection, whereas cautious individuals are likely to stop. Therefore, the correlation between dispositions and behavior is posited to be higher in weak situations than in strong situations.

As another (and more work-related) example, inter-individual variance in conscientious behavior should be restricted in situations wherein dependability, meticulousness, persistence, industriousness, and goal-directedness are explicitly expected and rewarded (i.e., strong situations). There should be more inter-individual variance in conscientious behavior, however, in situations wherein such traits are neither explicitly expected nor rewarded (i.e., weak situations). In the former case, conscientious behavior should be exhibited by most individuals, regardless of personality; in the latter case, conscientious behavior should be exhibited only by those with a conscientious personality (Fleeson, 2007).

The present research uses recent developments (that the present authors have helped lead) to adopt a more thorough and theoretically grounded approach to the research of situational strength, thereby affording for the first time a comprehensive test of the contention that the predictive validity of non-cognitive, dispositional constructs varies as a function of the strength of the situation. Such an empirical test is an important advancement because the behavioral effects of strong situations are often viewed as an organizational truism, as opposed to an empirical question deserving of rigorous inquiry (Cooper & Withey, 2009). The present research additionally takes the situational strength literature in an entirely new direction by assessing employees' preferences for specific levels of situational strength, which in turn allows for an assessment of the deleterious consequences of a misfit between the perceived and desired strength of the situation on important outcomes such as work stress, job satisfaction, organizational commitment, and turnover intentions. Thus, the purpose of this research is to enhance our knowledge of situational strength by developing a more comprehensive theory of person-situation interactions, more thoroughly testing its primary postulates, and examining its effects from the perspective of person-environment fit. We believe these contributions have important implications for the use of non-cognitive, dispositional predictors in Army-relevant human resources capacities. More generally, we (like others; see Snyder & Ickes, 1985) believe that the idea of situational strength, if properly developed, represents the single most promising area of research into the impact of situations on human behavior.

Background

We begin this section by describing the research problem. We next describe psychological theory relevant to the construct of situational strength. Subsequently, we provide a few illustrative examples of extant research on situational strength. These examples illustrate the contributions of the extant research as well as the ad hoc and varied manner in which researchers have operationalized situational strength. We end the section by classifying extant operationalizations into four categories, or facets, of situational strength.

Research Problem

Although the idea of situational strength is widely accepted, prior to our current program of research there had been surprisingly little theoretical work on the construct. There were at least three negative implications of this lack of development. First, no guiding principles existed to help inform operationalizations of situational strength. Extant empirical studies had, therefore, been forced to use either construct-deficient proxies (e.g., autonomy) or ad hoc vignettes in which aspects of situational strength were manipulated. Second, because there were no agreed-upon ways to operationalize situational strength, there were also no agreed-upon ways to quantify variations of it in natural settings, thereby limiting the ability of researchers and practitioners to capitalize on its effects (e.g., in the context of employee selection). Third, this lack of development had prevented researchers and practitioners from exploring additional implications of situational strength, some of which—such as the harmful consequences of a misfit between the perceived strength of the situation and the desired amount of strength—we explore in the current research.

Theory

The concept of situational strength began to gain traction in 1968, after Walter Mischel criticized trait-based research for being “insufficiently sensitive to the role of situations, to the discriminativeness of behavior, and to the complexity of personality and its multiple and interacting determinants” (Mischel, 1999; p. 456; see also Mischel, 1968). Mischel argued that one particular situational force, situational strength, is likely to affect the expression of traits, thereby moderating various trait-outcome relationships. Specifically, he posited that traits have less of a determining impact on behaviors in “strong” situations, which provide: (1) salient and uniformly interpreted behavioral cues, (2) prescriptions regarding appropriate behaviors, (3) training/information leading to the development of the skills necessary to engage in prescribed behaviors, and (4) adequate incentives for these behaviors (Mischel, 1977).

The relative presence or absence of these conditions can be communicated through a number of organizational factors such as social information, formal policies and procedures, or job characteristics (Mullins & Cummings, 1999). When information from these sources fails to inform individuals about the most appropriate course of action, employees are more likely to deal with this ambiguity by relying upon their unique dispositional proclivities, which are the most salient sources of information regarding potentially appropriate responses (Mischel & Peake, 1982). The primary postulate associated with situational strength, therefore, is that strong situations will restrict the behavioral expression of dispositions, thereby muting their predictive validity. In other words, dispositional forces should better predict behavior in weak than in strong situations.

At the core of this idea is the understanding that questions such as “Which is more important, the person or the situation?” are too simplistic to have any real psychological value. More interesting and meaningful results will be found by elucidating the conditions under which person-variables are more versus less influential (e.g., Chatman, 1989; Mischel, 1977). Examining situational strength in a more thorough and meaningful manner will, therefore, improve psychologists’ understanding of disposition-situation interactions, and thereby substantially improve personnel-selection systems by allowing researchers and practitioners to more accurately estimate criterion-related validities (Johnson, Steel, Scherbaum, Hoffman, Jeanneret, & Foster, 2010; Meyer, Dalal, & Bonaccio, 2009; Meyer, Dalal, & Hermida, 2010; Peterson & Bownas, 1982).

In particular, the actual meta-analytic criterion-related validities of personality constructs are substantially lower than many researchers and practitioners typically expect (Morgeson, Campion, Dipboye, Hollenbeck, Murphy, & Schmitt, 2007a, 2007b). Indeed, based on existing meta-analytic results, Morgeson et al. (2007b) maintain that personality tests “are poor predictors of criteria such as job performance and are difficult to justify as a basis for making high-stakes decisions about individuals” (p. 1032). Similarly definitive—and equally pessimistic—statements were made by Guion and Gottier (1965), in their earlier review of the literature.

Murphy and Dzieweczynski (2005) argued that one important reason for the disappointing validities of personality measures is the neglect of the situation, or, more precisely, the strength of the situation. Indeed, a recent meta-analytic investigation indicates that the observed (i.e., prior to statistical correction) predictive validity of conscientiousness varies from $r = 0.09$ (for extremely

strong occupations, such as “nuclear equipment operation technicians” and “subway and streetcar operators”) to $r = 0.24$ (for extremely weak occupations, such as “curators” and “poets, lyricists, and creative writers”; Meyer et al., 2009). Thus, the typically-reported meta-analytic effect size estimate of the conscientiousness-performance relationship—specifically, observed $r = 0.13$ (Barrick & Mount, 1991)—only tells part of the story because it aggregates across diverse occupations and, therefore, across greatly discrepant levels of situational strength. In both Army and civilian contexts, the validity of non-cognitive, dispositional predictors can best be understood by explicitly taking situational strength into account. For example, in the Army, the criterion-related validity of conscientiousness is likely to differ greatly across Military Occupation Specialties (MOSs).

Existing Situational Strength Research

Several studies have used a variety of operationalizations of situational strength to better justify their predicted effects. However, because a well-accepted operationalization of situational strength did not exist, the authors of these studies had no choice but to use imperfect proxies. Nonetheless, the extant research provides some insight into the veracity of Mischel’s (1968) original claims (Meyer et al., 2010). It is therefore useful to examine a few representative examples of studies that have operationalized situational strength in various ways.

The most frequently used operationalization of situational strength may well be autonomy, the idea being that an employee’s unique profile of dispositions is most likely to affect his or her behavior when the employee is allowed substantial latitude in deciding what tasks to perform as well as when and how to perform them. Conversely, when external sources of information such as supervisors’ instructions, policies and procedures, regulations, or norms stipulate precise courses of action, the domain of acceptable behaviors is minimized, behavior is homogenized, variance in the criterion is restricted, and relevant correlations are attenuated (Johns, 2006; Snyder & Ickes, 1985).

Evidence for autonomy as a legitimate and meaningful operationalization of situational strength comes in many forms. At a theoretical level, Hackman and Oldham (1976) argue that “to the extent that a job has high autonomy, the outcomes depend increasingly on the individual’s own efforts, initiative, and decisions rather than on the adequacy of instructions from the boss or on a manual of job procedures” (pp. 257-258, *italics in original*). At an empirical level, the conscientiousness-performance relationship has been shown via multiple methods to be negligible in low-autonomy jobs but positive and significant in high-autonomy jobs (see Barrick & Mount, 1993; Meyer, Dalal, & Bonaccio, 2009). Some researchers have even taken this one step further by arguing that conscientious behavior can be influenced by the amount of situational structure, thereby diminishing the ability of the personality trait of conscientiousness to predict relevant outcomes (Fleeson, 2007).

Perceived levels of organizational politics have also been used as an operationalization of situational strength, the argument being that a high level of organizational politics blurs the distinction between appropriate and inappropriate behaviors (i.e., weakens the situation; Hochwarter, Witt & Kacmar, 2000). Again assessing the conscientiousness-performance relationship, Hochwarter et al. argued that conscientious employees should be more likely to succeed in highly political environments because these employees are more likely to identify key priorities and exercise self-

discipline than their non-conscientious coworkers. Consistent with a situational strength explanation, their findings indicate that conscientiousness is significantly related to job performance among employees perceiving average-to-high levels of organizational politics, and virtually unrelated to performance among employees perceiving low levels of organizational politics.

The extent to which individuals receive specific, task-related feedback has also been tested as an operationalization of situational strength (LePine, Hollenbeck, Ilgen, Colquitt, & Ellis, 2002). Specifically, LePine et al. tested the moderating effects of task-related feedback on the relationship between team gender composition and team aggressiveness. The provision of feedback was assumed to increase the strength of the situation. Consistent with a situational strength explanation, the authors found a significant moderating effect in the hypothesized direction, such that teams that were male-dominated made very aggressive decisions when they did not receive feedback but did not make very aggressive decisions when they did receive feedback. Stated differently, the relationship between team gender composition and team aggressiveness was stronger when feedback was absent (weak situation) than when it was present (strong situation).

Although moderating effects couched in situational strength terms have generally been tested with respect to the relationship between personality and some valued outcome, it is important to note that this is not always the case. Indeed, a recent examination into environmental preferences found that transformational leaders generally preferred to work in adhocracy/clan-based organizations, which are characterized by a fluid and dynamic structure (i.e., weak situations), whereas transactional leaders preferred to work in autocratic/hierarchical organizations, which are characterized by formal rules and policies (i.e., strong situations; Masood, Dani, Burns, & Backhouse, 2006).

Although the aforementioned examples are interesting and important, they also demonstrate the ad hoc nature in which situational strength has traditionally been conceptualized and operationalized. One method of improving our theoretical understanding of this construct is to systematically categorize the ways in which previous researchers have successfully operationalized the construct, in order to better understand the aspects of work situations that are most likely to affect situational strength (Gellatly & Irving, 2001).

Facets of Situational Strength

In our previous research (Meyer, Dalal, & Hermida, 2010), we systematically categorized extant research on, and related to, situational strength. We searched a variety of electronic databases for terms relevant to situational strength and conducted a cited-references search using seminal citations in this area. This yielded numerous studies that were relevant to situational strength in some capacity—including theoretical discussions of situational strength, specific attempts to operationalize situational strength, and discussions of other constructs that bear a close resemblance to aspects of situational strength (e.g., cultural tightness-looseness). We examined and categorized each of these studies. Ultimately, we determined that four broad categories (Clarity, Consistency, Constraints, and Consequences) best accounted for these studies. Thus, our previous research concluded that situational strength's construct space can best be represented by four facets. We provide a brief

description of each of these facets below, while directing readers to Meyer et al. (2010) for a more in-depth treatment.

Clarity. The first facet is defined as the extent to which cues regarding work-related responsibilities or requirements are available and easy to understand. This addresses the idea that detailed information pertaining to what tasks to do, when to do them, and how to do them strengthens situations by reducing behavioral ambiguity. An example is a situation wherein clear and detailed information about the necessary tasks is provided, as are step-by-step instructions describing how and when to perform them. Here, unique judgments are less likely to influence behavioral responses compared to situations wherein no such information is provided. Some specific operationalizations that fit into this category include: leader-provided information pertaining to practices, strategies, and goals (Gonzales-Roma, Peiro, & Tordera, 2002), and social cues regarding behavioral norms (Salancik & Pfeffer, 1978).

Consistency. The second facet is defined as the extent to which cues regarding work-related responsibilities or requirements are compatible with each other. This operationalization addresses the idea that inconsistent demands weaken situations by revealing the absence of a universally agreed-upon course of action. For example, employees' dispositions are more likely to guide their behavior when instructions provided by one authority figure conflict with instructions provided by another. Some specific operationalizations that reflect this facet include the consistency of organizational values and norms (Chatman, 1989) and a common understanding of the organization's mission and methods (Davis-Blake & Pfeffer, 1989).

Constraints. The third facet is defined as the extent to which a person's freedom to make decisions or take action is limited by forces outside his or her control. This operationalization addresses the idea that situations are strengthened when entities external to the individual (e.g., supervisors, rules, regulations) limit the range of acceptable courses of action, whereas situations are weakened when personal latitude is granted (Hackman & Oldham, 1980; Hattrup & Jackson, 1996; Johns, 2006; Meyer, Dalal, & Bonaccio, 2009). Some sample operationalizations that fit into this category include the extent to which autonomy is absent (Barrick & Mount, 1993; Simmering, Colquitt, Noe, & Porter, 2003), performance is monitored (Robie & Ryan, 1999), tasks are structured (Meier, 1970), behavioral rules are enforced (Davis-Blake & Pfeffer, 1989), and social pressures to behave in specific ways are perceived by the employee (Wallace, Paulson, Lord, & Bond, 2005).

Consequences. The last facet is defined as the extent to which decisions or actions have important consequences for any relevant person or entity. This operationalization addresses the idea that situations are strengthened to the extent that employees' decisions or actions have the potential to affect the lives, health, or safety of oneself or others, whereas situations are weakened to the extent that outcomes are relatively innocuous (Meyer, Dalal, & Bonaccio, 2009). For example, in occupations wherein relatively unimportant outcomes are common (e.g., tour guides), conscientious behavior is primarily a function of conscientious personality because situational influences do not encourage uniformly conscientious behaviors; however, in occupations wherein very important outcomes are common (e.g., explosives handlers), conscientious behavior is primarily a function of situational demands because the extreme consequences of behaviors encourage employees to have a stronger task-orientation, regardless of their natural level of trait conscientiousness (Bekkers, 2005;

Fleeson, 2007). Some sample operationalizations that fit into this category include the extent to which individuals are held accountable for their actions (Gelfand & Lim, 2004), the extent to which there exist monetary incentives for high performance (Camerer & Hogarth, 1999), the extent to which specific behaviors are punished or rewarded (Tett & Burnett, 2003), the extent to which employees' actions have the potential for negative consequences (Thornton & Knox, 2002), and the extent to which organizational culture stresses attention to detail (Miron, Erez, & Naveh, 2004).

Global Situational Strength. Lastly, global situational strength represents the combined effects of each of the aforementioned facets. Assessing global situational strength is important because the facets may not necessarily "agree" with each other in a particular situation (i.e., some facets might indicate that the situation is strong, others might indicate that it is weak, and still others might indicate that it is neutral). Thus, if one is interested in using situational strength to help predict actual behavior, it is important to understand the global level of strength. If, on the other hand, one is interested in understanding the psychological mechanisms through which situational strength affects a given trait-outcome relationship, a facet-based approach is more appropriate. Said differently, if one's focus is "use" (the traditional goal of applied research), a global (i.e., composite) conceptualization should be used; conversely, if one's focus is "understanding" (the traditional goal of basic research), a facet-based conceptualization should be used (Schmidt & Kaplan, 1971; Stokes, 1997). Given the basic *and* applied nature of the current research, the effects of *both* global situational strength and its facets are examined here.

The Current Research

The current research includes two projects. Project One focuses on developing a measure of situational strength that is consistent with the aforementioned four-facet structure developed by Meyer et al. (2010), and then using this measure to test novel, yet theoretically-based, hypotheses regarding the effects of situational strength. Project Two takes situational strength research in a completely new direction by focusing on individual employees' preferences for situational strength and by examining the deleterious effects of a misfit between preferred and perceived situational strength.

Chapter 2

Project One—Measuring Job-Related Situational Strength and Assessing its Interactive Effects with Personality on Voluntary Work Behavior

This project examines the effects of situational strength on the expression of two aspects of employee job performance: organizational citizenship behavior and counterproductive work behavior. Our focus on these two aspects of job performance is an important extension of extant research (see, e.g., Meyer et al., 2009), which has generally focused on the criterion of task performance. Thus, the present research represents a novel contribution to the situational strength literature because citizenship and counterproductive behavior are substantially different from task performance. Specifically organizational citizenship behavior is defined as behavior intended to help the organization, and counterproductive work behavior as behavior intended to harm the organization (Dalal, 2005). Because both of these forms of job performance have an element of voluntariness or discretion associated with them, they have collectively been referred to as voluntary work behavior (e.g., Spector & Fox, 2002).

Moreover, because no standardized instrument designed to measure situational strength existed, it was necessary to develop and validate such a measure before assessing its impact on voluntary work behavior. The following three-phase structure is used to simultaneously accomplish both of these goals. Phase 1 describes how a bank of job-relevant items was written, refined, and initially reduced in number. Phase 2 explains how items were selected to form the Situational Strength at Work (SSW) scale, assess its psychometric properties, and examine its convergent and discriminant validity. Phase 3 tests a series of theoretically-derived hypotheses in an effort to make a substantive contribution to both the situational strength and voluntary work behavior literatures.

Phase 1: Item Development and Initial Screening

The purpose of this phase was to develop an initial bank of items and retain those with the highest content validity (DeVellis, 1991; Hardesty & Bearden, 2004; Hinkin, 1998; Netemeyer, Bearden, & Sharma, 2003). Deductive scale development (Hinkin, 1995) was used to write items that tap the four facets of situational strength. After these items were further refined, an independent sample of participants sorted them into the situational strength facets on the basis of their content (Hinkin, 1998). A combined "Method and Results" section is used to describe this process.

Method and Results

Participants

Phase 1 participants were 101 undergraduates who worked at least part-time and were enrolled in a management course at a large university located in the mid-Atlantic United States. Given that the task in question involves sorting items into categories on the basis of their content, Hinkin (1998) has argued that "it may be appropriate to use a small sample of students as this is a cognitive task not requiring an understanding of the phenomena under examination" (p. 109). Participants were, on

average, 24.1 years old, worked an average of 19.7 hours per week, and had held an average of 1.6 full-time jobs in their lifetime. Participants were also diverse with respect to job title, gender (54.7% female), ethnicity (39.6% Asian or Pacific Islander; 31.7% White, non-Hispanic; 8.9% Black, non-Hispanic; 6.9% Hispanic or Latino/a; and 12.9% "other"), and primary language (though all participants were relatively fluent in English, 46.5% indicated that English was not their first language).

Procedures

Sorting task. Participants were presented with the names and construct definitions of each of the four facets of situational strength. They were then presented with a randomized list of 77 items (14 items for clarity, 20 for consistency, 24 for constraints, and 19 for consequences), that were written and refined by the authors. Participants were asked to place each item into one of five categories. Each of the first four categories was represented by the facet name and definition (from Meyer, Dalal, & Hermida, 2010); participants were instructed to use the fifth (i.e., "miscellaneous") category for items adjudged to not fit well into any particular category. The results of this activity were then used to create the following item sorting quality index, which was used to quantify the extent to which each of the initial items was classified in a manner consistent with the intended facet structure.

Sorting index. First, the percentage of participants who sorted each item into the "correct" facet was calculated to favor items that performed as intended. Second, the standard deviation of the percentage of participants who sorted each item into each alternative (i.e., "incorrect") facet was calculated to favor items for which sorting errors were distributed homogenously (Hinkin, 1995). Third, the proportion of participants who sorted each item correctly was compared across demographic sub-groups (i.e., men versus women, those who worked fewer than 10 hours per week versus those who worked 10 or more hours per week, those with versus without prior full-time work experience, and native versus non-native speakers of English) to favor items that were sorted similarly by participants from diverse backgrounds. The final item quality index was created by summing the z-scores of each of the aforementioned three indicators. The 13 items within each facet that had the highest score on the sorting index were retained for use in Phase 2. None of the reverse-scored items survived this process, which is not particularly surprising because such items are often confusing to participants and tend to exhibit poor psychometric properties (Hinkin, 1998; Netemeyer et al., 2003).

It is important to note that the comparison of native versus non-native speakers of English identified six otherwise-well-performing items that showed differences of more than 20 percentage points across these two groups. All six of these items were categorized "correctly" to a greater extent by native than non-native English speakers, suggesting the possible existence of difficult and/or colloquial language. Consequently, three general changes were made to these items: (1) the word "expectations" was replaced with clearer alternatives (e.g., "informal guidelines"), (2) items previously written in the passive voice were now phrased in the active voice, and (3) variations of the word "conflict" (when used as a verb) were replaced with variations of the word "interfere." This type of analysis is important because questionnaires that are hard to read are likely to exhibit psychometric problems such as lower reliability and more missing data (E. Stone, D. Stone, & Gueutal, 1990). Finally, in an effort to prevent range restriction in the consequences facet (results from a separate pilot sample of 63 employed undergraduate students suggested that these participants disproportionately

tended to view their jobs as highly consequential), four additional items deliberately written to be more extreme were added to the measure of consequences after the sorting task.

Discussion

Phase 1 was designed to reduce the initial bank of 77 items to a more manageable subset via a formalized assessment of content validity. Thirteen items within each facet were retained using the previously discussed procedure, and four relatively extreme items were added to the consequences facet in order to ensure adequate range in scores on that facet. This process resulted in 56 items, which were further refined in the next phase.

Phase 2: Secondary Screening and Convergent/Discriminant Validity

The purposes of this phase were to (a) determine the final SSW scale (the statistical and conceptual considerations used to select the strongest items are described in detail in the "Item Retention" portion of the Phase 2 "Results" section), (b) assess its psychometric soundness, (c) assess its facet structure, and (d) assess its convergent and discriminant validity (DeVellis, 1991).

Hypotheses

Facet structure. Given that the SSW was developed to reflect the four-facet structure of situational strength (outlined previously), the first hypothesis tests the extent to which this goal is met.

Hypothesis 1: The intended four-facet model will fit the data better than several other theoretically viable alternatives.

We next develop several hypotheses concerning convergent and discriminant validation. In this process, researchers traditionally demonstrate that measures of the same construct are more strongly related than measures of different constructs (Campbell & Fiske, 1955). However, because no other comprehensive measures of situational strength exist, we take a similar but broader approach by comparing the magnitude of empirical relationships between situational constructs that, from a conceptual standpoint, should be more versus less strongly related to situational strength.

Clarity. Feedback (i.e., information from external sources about work-relevant behaviors; Kluger & DeNisi, 1996) overlaps conceptually with clarity because both are focused on the extent to which job-relevant information is provided to employees by an external source. Task significance (i.e., "the degree to which the job has a substantial impact on the lives or work of other people;" Hackman & Oldham, 1976, p. 257), on the other hand, is conceptually less related to clarity because the former is focused on the importance of one's work whereas the latter is focused on the understandability of relevant cues. We therefore predict that:

Hypothesis 2: The situational strength facet of clarity will be more strongly related to feedback than to task significance.

Consistency. Role conflict (i.e., the extent to which various job requirements are incompatible/incongruent with each other; Rizzo, House, & Lirtzman, 1970) overlaps conceptually with (in)consistency because both deal with the extent to which various sources of behaviorally

relevant information convey similar versus dissimilar messages (although role conflict focuses specifically on role-relevant behaviors whereas consistency attempts to capture more diverse sources of information, such as informal guidance and supervisors' instructions). Task significance (defined previously), on the other hand, is conceptually less related to consistency because the former is focused on the importance of various aspects of one's work whereas the latter is a function of the agreement between sources of work information. We therefore predict that:

Hypothesis 3: The situational strength facet of consistency will be more strongly related to role conflict than to task significance.

Constraints. Autonomy (i.e., "the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and determining the procedures to carry it out" Hackman & Oldham, 1976, p.258) overlaps conceptually with the inverse of constraints because both constructs pertain to the extent to which behavioral options are influenced by some outside source (although "constraints" is a broader construct that attempts to capture the extent to which employees' behavioral discretion is minimized by any source of outside information whereas "autonomy" focuses on the freedom granted by the job itself). Role ambiguity (i.e., a lack of predictability regarding outcomes and/or the appropriateness of particular behaviors; Rizzo, House, & Lirtzman, 1970), on the other hand, is conceptually less related to constraints because the former pertains to one's certainty regarding responsibilities whereas the latter refers to the extent to which one's freedom at work is restricted by others. We therefore predict that:

Hypothesis 4: The situational strength facet of constraints will be more strongly related to autonomy than to role ambiguity.

Consequences. Production responsibility (i.e., "the cost of errors in terms of both lost output and damage to expensive equipment;" Jackson, Wall, Martin, & Davids, 1993, p.754) overlaps conceptually with consequences because both deal with the impact of one's work on important outcomes. Autonomy (defined previously), on the other hand, is conceptually less related to consequences because the former deals with the amount of choice one has in his or her work whereas the latter deals with the importance of work outcomes. Although one could argue that, as the consequences of a job increase, employees will tend to have less autonomy, the presence and diversity of many high-consequences jobs that also inherently contain a large amount of autonomy (e.g., CEOs, police officers) suggests that this relationship will likely be relatively trivial. We therefore predict that:

Hypothesis 5: The situational strength facet of consequences will be more strongly related to production responsibility than to autonomy.

Method

Participants

Phase 2 participants were 394 adults working full-time in a variety of geographic areas. These participants were, on average, 40.6 years old, worked an average of 40.5 hours per week, and had worked in their current organization for an average of 8.8 years. The jobs represented in this sample were kept intentionally diverse in an attempt to capitalize on the notion that situational strength varies meaningfully across job types (Meyer et al., 2009). Participants were mostly (78.8%) White, but were diverse with respect to gender (49.7% female) and educational attainment (median education level = completed at least some college education).

This sample was gathered via Syracuse University's StudyResponse Project (<http://studyresponse.syr.edu>), which is a non-profit service that facilitates online research by electronically recruiting adult participants (Stanton & Weiss, 2002; Stanton, 2006; Wallace, 2004; see Umphress, Bingham, & Mitchell, 2010, and Young, Baltes, & Pratt, 2007, for examples of recently published empirical studies that have used the StudyResponse project).

Procedures

Participants were sent an invitation email containing eligibility requirements, instructions, and a link to an online survey. As per contemporary guidelines regarding ways to reduce the potential effects of common method bias (e.g., Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), each of the scales was separated physically, psychologically, and temporally (e.g., via transitions, unique directions, and visually distinct presentation formats); further, respondents were guaranteed confidentiality, which also has been shown to reduce response distortion (Tourangeau & Yan, 2007). Participants who completed the survey were given a gift certificate to a popular online retailer valued at \$7.00, the administration of which was managed by the StudyResponse Project (thereby maintaining confidentiality).

Materials

Initial situational strength items. The 56 items that remained after the initial screening process were further refined to form the final instrument. Each facet was measured using a seven-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree); all items were phrased so that higher scores indicated stronger situations, whereas lower scores indicated weaker situations.

Convergent/Discriminant Scales. Three scales from the Job Diagnostic Survey (Hackman & Oldham, 1974) were used to help assess convergent and discriminant validity. Feedback was assessed via six items (i.e., by combining the subscales for "external agents" and "the job itself," as is commonly done) and yielded an internal consistency reliability estimate (i.e., Cronbach's alpha) of .77; task significance and autonomy were assessed via three items each and yielded internal consistency reliability estimates of .58 and .63, respectively. The latter two reliability estimates, though low, are comparable to those obtained in Hackman and Oldham's (1974) original validation research ($\alpha = .66$ for both) and in a subsequent meta-analysis of these scales ($\alpha = .67$ and .69, respectively; Fried & Ferris, 1987). Each of these constructs was measured using a seven-point Likert-type scale ranging from 1 (very inaccurate) to 7 (very accurate).

Three additional scales were also used to help assess convergent and discriminant validity. Production responsibility ($\alpha = .86$) was assessed using Jackson, Wall, Martin, and Davids' (1993)

five-item scale, which uses a Likert-type scale ranging from 1 (not at all) to 5 (a great deal). Role conflict and role ambiguity ($\alpha = .91$ for both scales) were measured using Rizzo, House, and Lirtzman's (1970) eight-item and six-item scales, respectively, both of which use a Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Results

Item Retention

An "internal item quality" (IIQ) index was developed to select the items that would ultimately serve as the final instrument (Stanton, Sinar, Balzer, & Smith, 2002). Specifically, this index consisted of (a) item-total correlations, (b) each item's sorting quality score (from Phase 1), and (c) an indication of whether or not (scored as either a 1 or 0) the item was one of the two items per facet that were intentionally written to closely match its facet definition (as opposed to being written to map the facet's broader construct space). The first two indicators were z-scored, then all three were averaged to yield each item's IIQ score. The top seven items within each facet were selected for ultimate retention. Cronbach's alpha estimates for the resultant scales were all greater than .85 (clarity = .95, consistency = .90, constraints = .89, consequences = .86).

Upon examining the content of each facet, however, it was determined that clarity and consistency appeared to be potentially "bloated specific" (Cattell, 1978); that is, each of their Cronbach's alpha estimates may have been artificially inflated by the similarity of the content and/or phrasing of their items. In an attempt to minimize this issue, a subject matter expert with more than 20 years of instrument development experience (who was blind to the intent of this activity) independently read each item within these two facets and highlighted those that appeared to contain the most overlap. Two items per facet were ultimately deemed to be overly redundant. Because one of these items (per facet) was intentionally written to reflect its facet definition, the first author replaced the non-definitional item with the alternative that appeared to best increase item diversity. The resultant internal consistency reliability estimates were identical to the originals to two decimal points (see Table 1 for each of the final items, plus relevant psychometric information).

Table 1

Phase 2 Items and Basic Psychometric Information

| Situational Strength Items | M | SD | ITC | Skew | Kurtosis | IIQ |
|---|------|------|-----|------|----------|-------|
| Clarity ($\alpha = .95$) | | | | | | |
| On this job, specific information about work-related responsibilities is provided. | 5.20 | 1.43 | .83 | -.72 | 0.04 | 0.83 |
| On this job, easy-to-understand information is provided about work requirements. | 4.96 | 1.59 | .85 | -.66 | -0.27 | 0.56 |
| On this job, straightforward information is provided about what an employee needs to do to succeed. | 4.98 | 1.62 | .83 | -.78 | -0.10 | 0.56 |
| On this job, an employee is told exactly what to expect. | 4.77 | 1.62 | .81 | -.60 | -0.54 | 0.35 |
| On this job, precise information is provided about how to properly do one's job. | 4.90 | 1.59 | .81 | -.62 | -0.34 | 0.21 |
| On this job, specific information is provided about which tasks to complete. ^a | 4.99 | 1.54 | .78 | -.69 | -0.28 | -0.50 |
| On this job, an employee is told exactly what is expected from him/her. | 5.07 | 1.58 | .83 | -.78 | -0.11 | 0.08 |
| Consistency ($\alpha = .90$) | | | | | | |
| On this job, different sources of work information are always consistent with each other. | 4.50 | 1.67 | .69 | -.30 | -0.83 | 1.01 |
| On this job, responsibilities are compatible with each other. | 5.08 | 1.45 | .70 | -.76 | 0.12 | 0.93 |
| On this job, all requirements are highly compatible with each other. | 4.92 | 1.47 | .71 | -.62 | -0.35 | 0.48 |
| On this job, procedures remain completely consistent over time. | 4.52 | 1.75 | .70 | -.40 | -0.90 | 0.33 |
| On this job, supervisor instructions match the organization's official policies. ^a | 5.01 | 1.60 | .65 | -.63 | -0.38 | -0.27 |
| On this job, informal guidance typically matches official policies. | 4.85 | 1.55 | .75 | -.60 | -0.18 | 0.04 |
| On this job, information is generally the same, no matter who provides it. | 4.42 | 1.68 | .70 | -.34 | -0.84 | -0.03 |

(Table continues)

Table 1 (continued)

| Situational Strength Items | M | SD | ITC | Skew | Kurtosis | IIQ |
|--|------|------|-----|------|----------|------|
| Constraints ($\alpha = .89$) | | | | | | |
| On this job, an employee is prevented from making his/her own decisions. | 3.81 | 1.85 | .72 | .15 | -1.15 | 0.68 |
| On this job, constraints prevent an employee from doing things in his/her own way. | 4.29 | 1.75 | .71 | -.24 | -0.94 | 0.56 |
| On this job, an employee is prevented from choosing how to do things. | 3.91 | 1.70 | .73 | .05 | -0.94 | 0.54 |
| On this job, an employee's freedom to make decisions is limited by other people. | 4.57 | 1.59 | .72 | -.38 | -0.59 | 0.35 |
| On this job, outside forces limit an employee's freedom to make decisions. | 4.48 | 1.67 | .56 | -.40 | -0.66 | 0.26 |
| On this job, procedures prevent an employee from working in his/her own way. | 4.31 | 1.64 | .74 | -.28 | -0.79 | 0.20 |
| On this job, other people limit what an employee can do. | 4.52 | 1.58 | .65 | -.33 | -0.60 | 0.08 |
| Consequences ($\alpha = .86$) | | | | | | |
| On this job, an employee's decisions have extremely important consequences for other people. | 5.04 | 1.38 | .60 | -.45 | -0.27 | 1.12 |
| On this job, very serious consequences occur when an employee makes an error. | 4.22 | 1.70 | .63 | -.13 | -0.90 | 0.87 |
| On this job, important outcomes are influenced by an employee's actions. | 5.39 | 1.26 | .51 | -.66 | 0.16 | 0.63 |
| On this job, other people are put at risk when an employee performs poorly. | 4.43 | 1.79 | .67 | -.26 | -0.98 | 0.46 |
| On this job, mistakes are more harmful than they are for almost all other jobs. | 4.23 | 1.79 | .73 | -.18 | -0.92 | 0.43 |
| On this job, tasks are more important than those in almost all other jobs. | 4.54 | 1.69 | .66 | -.42 | -0.65 | 0.29 |
| On this job, there are consequences if an employee deviates from what is expected. | 4.82 | 1.53 | .56 | -.52 | -0.25 | 0.23 |

^aItem added to reduce bloated specificity (Cattell, 1978).

Note. All items used a Likert-type scale, wherein 1=Strongly Disagree and 7=Strongly Agree. M = Mean. SD = Standard Deviation. ITC=Item Total Correlation. IIQ=Internal Item Quality score (for details, see the "item retention" section of the Phase 2 results).

Hypothesis Tests

Confirmatory factor analysis (CFA) was conducted via Amos version 17.0 to test Hypothesis 1. As per contemporary recommendations (Thompson, 2000), fit indices for the proposed four-facet structure were compared to a more parsimonious one-factor baseline model and other theoretically plausible alternatives in an attempt to avoid the confirmation bias (MacCallum & Austin, 2000). Two primary alternative models were tested here: (a) a two-factor model, in which items for clarity and consistency loaded on one factor while items for constraints and consequences loaded on the other, because, according to some theorizing (e.g., Deci & Ryan, 1987), the situational influences on behavior can be defined as either "autonomous" (clarity and consistency) or "controlled" (constraints and consequences) and (b) a three-factor model wherein items for clarity and consistency loaded onto a single factor (given the potential for conceptual overlap between these facets) while items for constraints and items for consequences each loaded on their own factor. All the models were admissible (i.e., no parameter estimates in any of the models were logically impossible), although, as can be seen in Table 2, not all the fit indices could be estimated for the one-factor model.

The results of these tests support Hypothesis 1, in the sense that the primary model demonstrates an acceptable level of congruence with the intended structure and outperforms each of the comparison models (see Table 2). Thus, the aforementioned four-facet structure with seven items per facet was retained as the ultimate Situational Strength at Work (SSW) scale (see Table 3 for facet inter-correlations).

Table 2

Phase 2 and Phase 3 Confirmatory Factor Analysis Results

| Model | χ^2 | df | χ^2/df | RMSEA | CFI | TLI | SRMR |
|--------------|----------|-----|-------------|-------|-----|-----|------|
| Phase 2 | | | | | | | |
| Four-factor | 861.5 | 344 | 2.50 | .07 | .90 | .89 | .06 |
| One-factor | 2,530.9 | 350 | 7.23 | .15 | .58 | .54 | WNE |
| Two-factor | 1,546.1 | 350 | 4.42 | .11 | .77 | .75 | .14 |
| Three-factor | 1,117.4 | 347 | 3.22 | .08 | .89 | .87 | .07 |
| Phase 3 | | | | | | | |
| Four-factor | 1,853.1 | 344 | 5.39 | .09 | .88 | .86 | .06 |
| One-factor | 7,317.1 | 350 | 10.62 | .18 | .46 | .37 | .21 |
| Two-factor | 4,233.2 | 350 | 12.10 | .14 | .70 | .65 | .16 |
| Three-factor | 2,500.8 | 347 | 7.21 | .10 | .83 | .80 | .07 |

Note. The table provides confirmatory factor analysis results from Phase 2 (the initial assessment of factor structure) and Phase 3 (a subsequent reassessment of factor structure using an independent sample). The four-factor model represents the predicted structure, wherein each item loads on the intended factor and all factors are allowed to correlate. The one-factor model is a standard comparison suggested by Thompson (2000). The two-factor model represents a theoretically viable alternative wherein items for clarity and consistency load on one factor, while items for constraints and consequences load on a second (Deci & Ryan, 1987). The three-factor model represents a theoretically viable alternative wherein items for clarity and consistency load on one factor, while items for constraints and items for consequences load on their own factors. RMSEA = root mean square error of approximation; CFI = confirmatory fit index; TLI = Tucker-Lewis index; SRMR = standardized root mean square residual. WNE = "would not estimate."

Table 3

Phase 2 and Phase 3 Inter-Correlations Between Facets of Situational Strength

| | M | SD | Clarity | Consistency | Constraints | Consequences |
|--------------|-----------|-----------|-----------|-------------|-------------|--------------|
| Clarity | 5.00/5.13 | 1.37/1.36 | (.95/.94) | .74* | .05 | .32* |
| Consistency | 4.75/4.88 | 1.26/1.29 | .81* | (.90/.91) | .05 | .29* |
| Constraints | 4.29/4.08 | 1.32/1.46 | .05 | .00 | (.89/.84) | .33* |
| Consequences | 4.67/4.91 | 1.17/1.23 | .37* | .34* | .47* | (.86/.89) |

* $p < .05$

Note. M = Mean. SD = Standard Deviation. In the M and SD columns, values to the left of the slash represent the Phase 2 estimates, whereas values to the right of the slash represent those from Phase 3. On the diagonal, values to the left of the slash represent the Phase 2 internal consistency reliability estimates, whereas values to the right of the slash represent those from Phase 3. Values below the diagonal represent the Phase 2 facet inter-correlations, whereas values above the diagonal represent those from Phase 3. All significance tests are two-tailed.

Convergent and discriminant validity for each situational strength facet was tested via Meng, Rosenthal, and Rubin's (1992) two-tailed difference test for dependent correlations. A statistically significant difference between the target facet's correlation with the convergent construct and its correlation with the discriminant construct indicates support for the hypothesis in question. Because, in some cases, differences between the directions (not just the magnitudes) of the two correlations being compared existed, we opted to take a conservative approach by always testing for the difference between the absolute values of the two correlations.

In support of Hypothesis 2, the difference between clarity's correlation with feedback ($r = .49$, $p < .001$) and its correlation with task significance ($r = .08$, $p > .05$) was statistically significant, $t(380) = 7.65$, $p < .001$. In support of Hypothesis 3, the difference between consistency's correlation with role conflict ($r = -.22$, $p < .001$) and its correlation with task significance ($r = -.01$, $p > .05$) was statistically significant, $t(385) = 3.23$, $p < .001$. In support of Hypothesis 4, the difference between constraints' correlation with autonomy ($r = -.45$, $p < .001$) and its correlation with role ambiguity ($r = .08$, $p > .05$) was statistically significant, $t(381) = 7.07$, $p < .001$. In support of Hypothesis 5, the difference between consequences' correlation with production responsibility ($r = .49$, $p < .001$) and its correlation with autonomy ($r = -.05$, $p > .05$) was statistically significant, $t(385) = 6.70$, $p < .001$.

Table 4

Phase 2 Correlation Matrix

| | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-------------------|------|------|---------|---------|---------|---------|---------|---------|---------|---------|-------|-------|
| 1. Clarity | 5.00 | 1.37 | (.95) | | | | | | | | | |
| 2. Consistency | 4.75 | 1.26 | .81*** | (.90) | | | | | | | | |
| 3. Constraints | 4.29 | 1.32 | .05 | .00 | (.89) | | | | | | | |
| 4. Consequences | 4.67 | 1.17 | .37*** | .34*** | .47*** | (.86) | | | | | | |
| 5. Feedback | 4.83 | 1.15 | .49*** | .36*** | -.21*** | .13** | (.77) | | | | | |
| 6. Task Sig. | 5.05 | 1.21 | .08 | -.01 | .00 | .36*** | .30*** | (.58) | | | | |
| 7. Role Conflict | 3.99 | 1.50 | -.30*** | -.22*** | .59*** | .30*** | -.40*** | -.04 | (.91) | | | |
| 8. Role Ambiguity | 2.51 | 1.17 | -.73*** | -.65*** | .08 | -.28*** | -.57*** | -.19*** | .34*** | (.91) | | |
| 9. Autonomy | 4.94 | 1.27 | .16** | .17** | -.45*** | -.05 | .39*** | .27*** | -.25*** | -.34*** | (.63) | |
| 10. Prod. Resp. | 2.91 | 1.09 | .21*** | .22*** | .27*** | .49*** | .06 | .09 | .33*** | -.20*** | .02 | (.86) |

* $p < .05$, ** $p < .01$, *** $p < .001$

Note. The situational strength facets, feedback, task significance, autonomy, role conflict, and role ambiguity were measured on a 1-7 Likert-type Scale; production responsibility was measured on a 1-5 Likert-type scale. All significance tests are two-tailed. Task Sig. = Task Significance. Prod. Resp. = Production Responsibility.

Discussion

Phase 2 analyses indicated adequate or better psychometric characteristics and strong evidence of convergent/discriminant validity. Thus, in an effort to contribute to the voluntary work behavior and situational strength literatures (while further contributing to the final instrument's construct validity) we used the SSW scale to test a series of theoretically-based substantive hypotheses.

Phase 3: Testing Substantive Hypotheses

It is commonly believed that relationships between dispositional traits and relevant outcomes are stronger in weak situations and weaker in strong situations (e.g., Davis-Blake & Pfeffer, 1989; Hattrup & Jackson, 1996; Meyer & Dalal, 2009; Mischel, 1977; Snyder & Ickes, 1985; Weiss & Adler, 1984). The specific theory necessary to make fine-grained predictions about which trait-outcome relationships are most and least likely to be moderated by situational strength (and its facets), however, does not yet exist (Meyer, Dalal, & Hermida, 2010). Consequently, we focus here on trait-outcome relationships that have not yet been examined from an interactional perspective, but for which there are conceptual reasons to expect moderation by situational strength.

With regard to outcomes, we focused on voluntary work behavior (Spector & Fox, 2002), which consists of organizational citizenship behavior (behavior that is at least somewhat discretionary and that helps, or is intended to help, the organization; Dalal, 2005) and counterproductive work behavior (behavior that is at least somewhat discretionary and that harms, or is intended to harm, the organization; Dalal, 2005). We focused on voluntary work behavior for two reasons. First, because such behavior is believed to be more discretionary than task performance (i.e., in-role behavior), personality is believed to relate more strongly to the former than the latter (Borman & Motowidlo, 1997). This is important because a moderator variable (here: situational strength) will be most beneficial if it contributes to our understanding of already-meaningful trait-outcome relationships. Second, the extent to which situational strength moderates the impact of one of the personality traits studied in the current paper—namely, conscientiousness—has already been meta-analytically assessed vis-a-vis task performance (albeit at the occupational level of analysis; see Meyer et al., 2009). Meyer et al. discussed the need to examine the impact of situational strength on the relationship between personality and organizational citizenship behavior (OCB), but were unable to do so themselves, given the secondary nature of their data. Indeed, the role of situational strength with regard to OCB and/or counterproductive work behavior (CWB) has not received attention in the extant literature (for an exception, see Beaty, Cleveland, & Murphy, 2001).

With regard to dispositional (personality) traits, we focused on conscientiousness and agreeableness. Here as well, we chose these constructs for two reasons. First, as mentioned previously, a moderator variable will be most beneficial if it contributes to our understanding of an already-meaningful trait-outcome relationship. Meta-analytic evidence indicates that conscientiousness is a significant predictor of both OCB and CWB (Dalal, 2005), and that agreeableness is related to CWB (Berry, Ones, & Sackett, 2007; Salgado, 2002) and, potentially, to OCB (Organ & Ryan, 1995). Second, it is also important that trait-outcome relationships are likely to demonstrate moderation. Here, neurological research suggests that neuroticism (Munafo, Clark, Moore, Payne, Walton, & Flint, 2003) and extraversion (Depue & Collins, 1999) are the most biologically engrained of the “Big Five” personality traits and, therefore, “may prove to be less sensitive to situation factors” (Wood & Beckman, 2006, p.459). Openness to experience has not generally been considered as a predictor of OCB or CWB, let alone one whose impact is likely to be moderated. Because conscientiousness and agreeableness are the only Big Five personality traits to meet both of these criteria, we test the following hypotheses:

Hypothesis 6: The conscientiousness-OCB relationship will be more strongly positive in weak situations than in strong situations.

Hypothesis 7: The agreeableness-OCB relationship will be more strongly positive in weak situations than in strong situations.

Hypothesis 8: The conscientiousness-CWB relationship will be more strongly negative in weak situations than in strong situations.

Hypothesis 9: The agreeableness-CWB relationship will be more strongly negative in weak situations than in strong situations.

Method

Participants and Procedures

Phase 3 participants were 588 adults working full-time in a variety of geographic areas, all of whom were also recruited through the StudyResponse Project (although no overlap existed with participants in the previous phase). Participants were, on average, 39.1 years old, worked 40.9 hours per week, and had worked in their current organization for 6.8 years. The job titles represented in this sample were, again, kept intentionally heterogeneous. Participants were mostly (76.3%) White, but were diverse with respect to gender (46.7% female) and educational attainment (median education level = completed at least some college education). Phase 3 procedures were identical to those used in Phase 2.

Materials

Situational strength. The SSW (described previously) was used to assess situational strength. Internal consistency reliability estimates were again above .85 for each facet (clarity = .94, consistency = .91, constraints = .84, consequences = .89). A global situational strength composite ($\alpha = .92$) was also calculated here.

Predictors. Conscientiousness ($\alpha = .88$) and agreeableness ($\alpha = .87$) were measured via Goldberg's (1999) International Personality Item Pool (IPIP). Ten items were used to assess each of these traits via a Likert-type scale with responses ranging from 1 (very inaccurate) to 5 (very accurate).

Criteria. Voluntary work behavior criteria consisted of OCB and CWB. OCB ($\alpha = .90$) was assessed via Williams and Anderson's (1991) 14-item measure, which uses a Likert-type scale with responses ranging from 1 (never) to 5 (always). All items were re-framed for the purposes of this research to be self-report (as opposed to supervisor-report). Examples include: "assist supervisor with his/her work (when not asked)" and "adhere to informal rules devised to maintain order." CWB ($\alpha = .96$) was assessed via Bennett and Robinson's (2000) 19-item measure, which uses a Likert-type scale with responses ranging from 1 (never) to 7 (daily). Examples include: "made an ethnic, religious, or racial remark at work" and "discussed confidential company information with an unauthorized person."

Results

Table 5 shows the correlations among the situational strength facets, personality factors (conscientiousness and agreeableness), and performance criteria (OCB and CWB).

Table 5

Phase 3 Correlation Matrix

| | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|----------------------|------|------|--------|--------|---------|--------|--------|---------|---------|--------|-------|
| 1. Clarity | 5.13 | 1.36 | (.94) | | | | | | | | |
| 2. Consistency | 4.88 | 1.29 | .74*** | (.91) | | | | | | | |
| 3. Constraints | 4.08 | 1.46 | .05 | .05 | (.84) | | | | | | |
| 4. Consequences | 4.91 | 1.23 | .32*** | .29*** | .33*** | (.89) | | | | | |
| 5. Global SS | 4.75 | .91 | .76*** | .75*** | .55*** | .69*** | (.92) | | | | |
| 6. Conscientiousness | 3.97 | .71 | .23** | .12** | -.18*** | .12** | .09* | (.88) | | | |
| 7. Agreeableness | 3.83 | .70 | .24** | .21*** | -.20*** | .06 | .11** | .52*** | (.87) | | |
| 8. OCB | 3.40 | .60 | .26*** | .28*** | .09* | .29*** | .33*** | .18*** | .21*** | (.90) | |
| 9. CWB | 2.03 | 1.26 | -.06 | -.01 | .30*** | .11** | .13** | -.47*** | -.47*** | .17*** | (.96) |

* $p < .05$, ** $p < .01$, *** $p < .001$

Note. Global SS = Global Situational Strength. OCB = Organizational Citizenship Behavior. CWB = Counterproductive Work Behavior. Each of the situational strength facets and CWB are measured on a 1-7 Likert-type scale. OCB, Conscientiousness, and Agreeableness are measured on a 1-5 Likert scale. All significance tests are two-tailed.

Reevaluation of the SSW's Factor Structure

Additional evidence of the SSW's factor structure was obtained by conducting CFAs on the Phase 3 data using procedures that were identical to those utilized previously. This analysis provides additional support for Hypothesis 1, in that, although all the models were admissible (i.e., no parameter estimates in any of the models were logically impossible), the intended model fit the data better than each of the tested rivals (see, again, Table 2).

Hypothesis Tests

The remaining hypotheses were tested using moderated multiple regression, wherein the standardized Big Five predictor of interest was entered in step one, the standardized situational strength facet of interest was entered in step two, and the cross-product of these two standardized predictors was entered in step three. This three-step procedure was used here (in lieu of the more typical and parsimonious two-step procedure) in order to isolate situational strength's main and moderator effects, that is, to better estimate the amount of additional variance that was explained by considering situational strength in the predictive equations. All significance tests were two-tailed.

We had predicted (Hypothesis 6) that situational strength would moderate the relationship between conscientiousness and OCB, such that the observed positive relationship would be stronger in weak situations and weaker in strong situations. This hypothesis was fully supported, in that all five interaction terms were significant (see Table 6 for a summary). Visual examinations of the resultant interaction plots confirmed that all effects were in the hypothesized direction (see Figure 1 for an example).

Table 6

Situational Strength's Moderating Effects on the Conscientiousness-OCB Relationship

| | β | R^2 | ΔR^2 |
|---|---------|-------|--------------|
| Conscientiousness | .16* | .032 | .032* |
| Global Situational Strength | .30* | .133 | .101* |
| Conscientiousness x Global Situational Strength | -.10* | .144 | .010* |
| Conscientiousness | .13* | .032 | .032* |
| Clarity | .25* | .084 | .052* |
| Conscientiousness x Clarity | -.14* | .102 | .019* |
| Conscientiousness | .16* | .032 | .032* |
| Consistency | .26* | .098 | .066* |
| Conscientiousness x Consistency | -.13* | .114 | .016* |
| Conscientiousness | .20* | .032 | .032* |
| Constraints | .14* | .047 | .015* |
| Conscientiousness x Constraints | -.12* | .065 | .017* |
| Conscientiousness | .14* | .032 | .032* |
| Consequences | .29* | .114 | .081* |
| Conscientiousness x Consequences | -.09* | .123 | .009* |

* $p < .05$

Note: Beta weights are standardized regression coefficients from the final step in the analysis. N = 581. OCB = Organizational Citizenship Behavior. All significance tests are two-tailed.

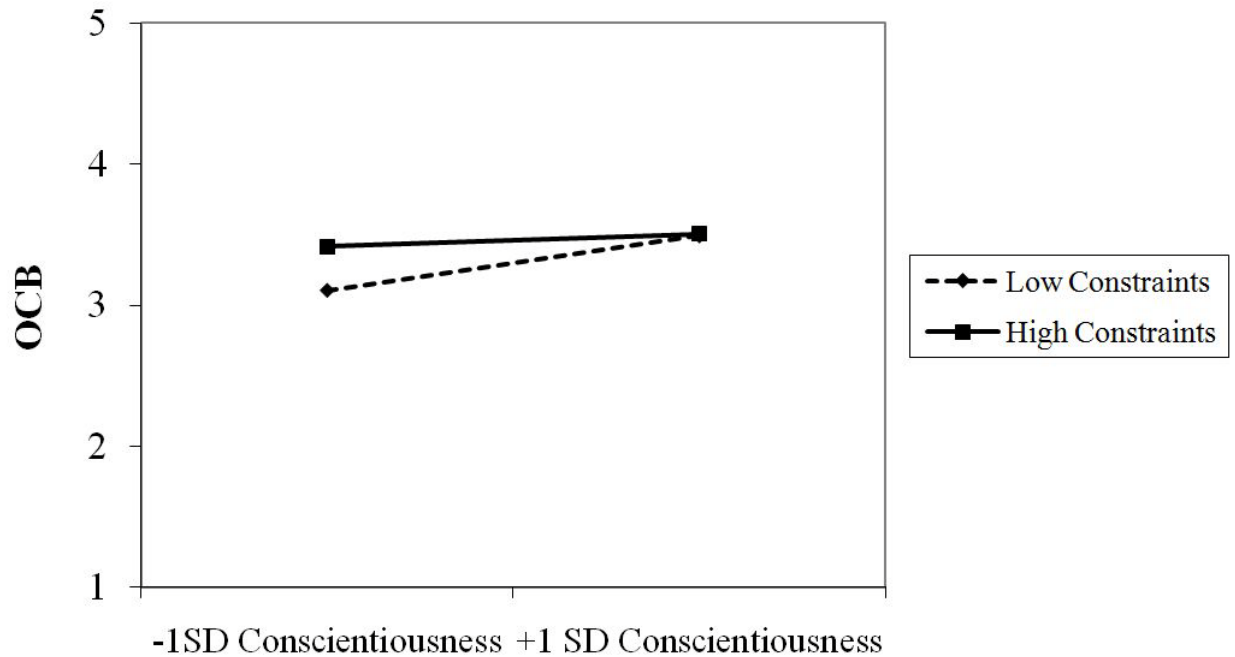


Figure 1. Plot of a significant interaction between the Big Five trait of Conscientiousness and the situational strength facet of Clarity in the prediction of Organizational Citizenship Behavior (OCB).

In addition, we had predicted (Hypothesis 7) that situational strength would moderate the relationship between agreeableness and OCB, such that the observed positive relationship would be stronger in weak situations and weaker in strong situations. This hypothesis was generally supported, in that four of the five interaction terms were significant and the remaining effect (i.e., for clarity) was marginally significant (see Table 7 for a summary). Visual examinations of the resultant interaction plots confirmed that all effects were in the hypothesized direction.

Table 7

Situational Strength's Moderating Effects on the Agreeableness-OCB Relationship

| | β | R^2 | ΔR^2 |
|---|-------------------|-------|-------------------|
| Agreeableness | .19* | .045 | .045* |
| Global Situational Strength | .30* | .142 | .097* |
| Agreeableness x Global Situational Strength | -.08* | .149 | .006* |
| Agreeableness | .17* | .045 | .045* |
| Clarity | .23* | .092 | .047* |
| Agreeableness x Clarity | -.07 [†] | .097 | .005 [†] |
| Agreeableness | .17* | .045 | .045* |
| Consistency | .24* | .101 | .056* |
| Agreeableness x Consistency | -.10* | .112 | .011* |
| Agreeableness | .25* | .045 | .045* |
| Constraints | .14* | .063 | .018* |
| Agreeableness x Constraints | -.10* | .074 | .011* |
| Agreeableness | .19* | .045 | .045* |
| Consequences | .29* | .129 | .084* |
| Agreeableness x Consequences | -.07* | .136 | .006* |

[†] $p < .10$, * $p < .05$

Note: Beta weights are standardized regression coefficients from the final step in the analysis. N = 581. OCB = Organizational Citizenship Behavior. All significance tests are two-tailed.

Furthermore, we had predicted (Hypothesis 8) that situational strength would moderate the relationship between conscientiousness and CWB, such that the obtained negative relationship would be stronger in weak situations and weaker in strong situations. This hypothesis was not supported. Although all five interaction terms were significant (see Table 8 for a summary), visual examinations of the resultant interaction plots indicated that all effects were in the direction opposite to that predicted on the basis of extant theory (see Figure 2 for an example). In other words, the observed negative relationships were consistently stronger in strong situations and weaker in weak situations.

Table 8

Situational Strength's Moderating Effects on the Conscientiousness-CWB Relationship

| | β | R^2 | ΔR^2 |
|---|---------|-------|--------------|
| Conscientiousness | -.47* | .219 | .219* |
| Global Situational Strength | .14* | .253 | .034* |
| Conscientiousness x Global Situational Strength | -.22* | .307 | .054* |
| Conscientiousness | -.47* | .219 | .219* |
| Clarity | .07 | .222 | .003 |
| Conscientiousness x Clarity | -.18* | .251 | .030* |
| Conscientiousness | -.46* | .219 | .219* |
| Consistency | .07 | .222 | .003 |
| Conscientiousness x Consistency | -.15* | .246 | .024* |
| Conscientiousness | -.43* | .219 | .219* |
| Constraints | .26* | .272 | .053* |
| Conscientiousness x Constraints | -.25* | .342 | .070* |
| Conscientiousness | -.49* | .218 | .218* |
| Consequences | .16* | .242 | .025* |
| Conscientiousness x Consequences | -.15* | .267 | .026* |

* $p < .05$

Note: Beta weights are standardized regression coefficients from the final step in the analysis. $N = 582$. CWB = Counterproductive Work Behavior. All significance tests are two-tailed.

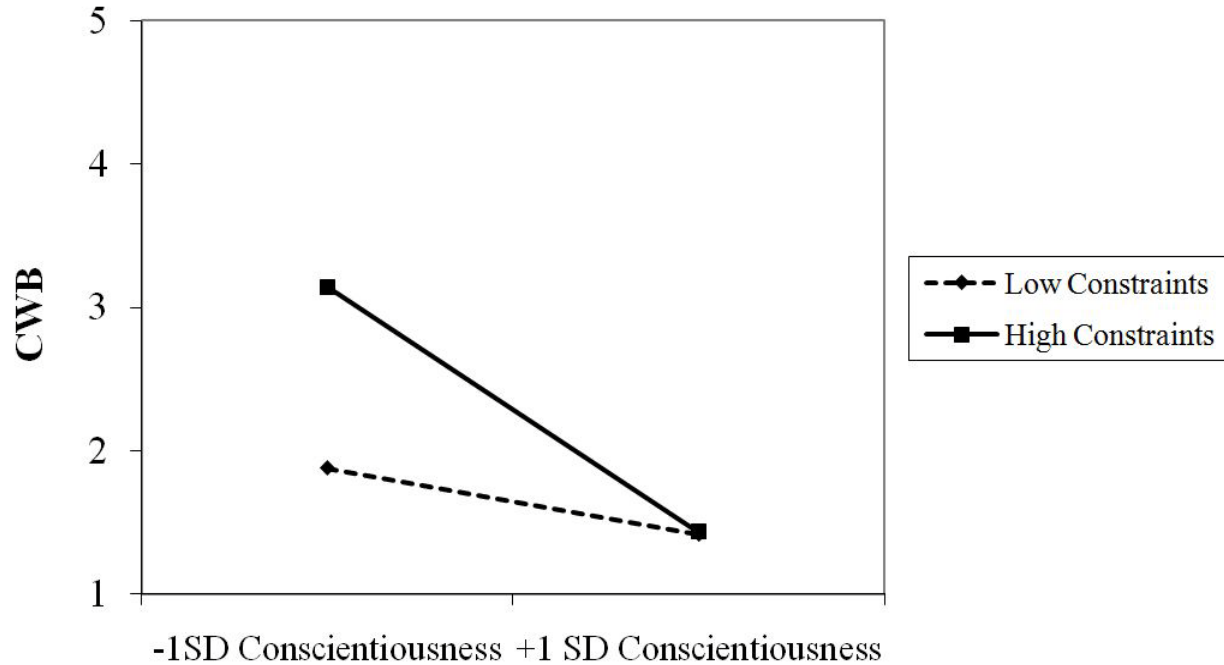


Figure 2. Plot of a significant interaction between the Big Five trait of Conscientiousness and the Situational Strength facet of Constraints in the prediction of Counterproductive Work Behavior (CWB). Contrary to theory, the strength of relevant relationships was stronger in strong situations and weaker in weak situations.

Finally, we had predicted (Hypothesis 9) that situational strength would moderate the relationship between agreeableness and CWB, such that the obtained negative relationship would be stronger in weak situations and weaker in strong situations. This hypothesis was also not supported. Although all five interaction terms were significant (see Table 9 for a summary), visual examinations of the resultant interaction plots indicate that, here too, the observed negative relationships were consistently stronger in strong situations and weaker in weak situations.

Table 9

Situational Strength's Moderating Effects on the Agreeableness-CWB Relationship

| | β | R^2 | ΔR^2 |
|---|---------|-------|--------------|
| Agreeableness | -.47* | .223 | .224* |
| Global Situational Strength | .16* | .261 | .037* |
| Agreeableness x Global Situational Strength | -.16* | .289 | .029* |
| Agreeableness | -.48 | .223 | .224* |
| Clarity | .07 | .225 | .004 |
| Agreeableness x Clarity | -.09* | .232 | .008* |
| Agreeableness | -.49* | .223 | .224* |
| Consistency | .10* | .234 | .010* |
| Agreeableness x Consistency | -.11* | .248 | .014* |
| Agreeableness | -.41* | .224 | .224* |
| Constraints | .24* | .274 | .050* |
| Agreeableness x Constraints | -.20* | .318 | .044* |
| Agreeableness | -.48* | .224 | .224* |
| Consequences | .14* | .242 | .018* |
| Agreeableness x Consequences | -.11* | .257 | .015* |

* $p < .05$

Note: Beta weights are standardized regression coefficients from the final step in the analysis. $N = 582$. CWB = Counterproductive Work Behavior. All significance tests are two-tailed.

Discussion

The Phase 3 CFA provided independent support for the SSW's facet structure, which is important because "it is preferable to validate a factor structure across different samples and to use the same method, either EFA or CFA, in both samples" (Kline, 2005; p. 205). The results of the Phase 3 hypothesis tests provide further support for the quality of the SSW as a measure. Specifically, nine of ten relationships were statistically significant (the remaining one was marginally significant) in the predicted direction for OCB and all ten were statistically significant in the direction opposite to that predicted for CWB. As opposed to serving as a strike against the construct validity of the SSW, however, the strength and consistency of the latter finding suggests the potential presence of an effect that is worthy of additional theoretical attention—an issue that is explored further in the "General Discussion."

General Discussion for Project One

Summary and Implications

The current findings suggest that the Situational Strength at Work (SSW) scale demonstrates adequate psychometric qualities. Specifically, a rigorous item retention strategy ensured content validity, confirmatory factor analyses across two independent samples supported the predicted four factor solution (Meyer et al., 2010), and each sub-scale demonstrated strong internal consistency reliability across two independent samples. More substantively, results also indicate strong evidence of convergent and discriminant validity, reasonably consistent moderating effects for OCB, and consistent moderating effects in the direction opposite to that predicted on the basis of extant theory for CWB. The following paragraphs outline three general implications of these findings.

First, the SSW provides a common way for authors of future primary studies to conceptualize and assess situational strength. Although Barrick and Mount (1993), Beaty, Cleveland, and Murphy (2001), Bowles, Babcock, and McGinn (2005), Masood, Dani, Burns, and Backhouse (2006), and many others have used situational strength to frame important questions pertaining to person-situation interactions, they were forced to utilize ad hoc and impoverished operationalizations and measures of this concept (Cooper & Withey, 2009; Meyer et al., 2010). We hope that the current efforts will add conceptual structure to the continued examination of situational strength's workplace effects.

Second, the current efforts show that situational strength can be used to help understand a variety of organizationally relevant phenomena. For example, adding situational strength to the predictive equations used here (including both its main and interactive effects) accounted for an average of 7.3% and 5.5% additional variance beyond the trait of interest for OCB and CWB, respectively. Thus, in addition to being used as a research tool, the SSW may be able to serve as a companion to traditional job analytic techniques, thereby yielding behaviorally relevant information that common approaches miss (Johns, 2006; Murphy & Dziewieczynski, 2005). It is our hope that this information can then be used to inform selection, motivation, job design, and training decisions (to name a few).

Lastly, these findings have important implications for future theoretical development. Most notably, the fact that relationships between the individual differences examined here and CWB were stronger in strong situations and weaker in weak situations suggests the presence of a complex interplay between (a) employees' individual differences, (b) the ways in which employees filter situational strength through these individual differences to give their work environment psychological meaning, and (c) the ways in which this meaning is manifested via subsequent behavioral reactions. Although space considerations prevent a full discussion of relevant issues, we predict that fundamental processes such as psychological reactance (Brehm, 1966; Brehm & Brehm, 1981), self-determination (Deci & Ryan, 1987) and differential framing (James & McIntyre, 1996) will play an important role in our understanding of this counter-theoretical, yet empirically robust, finding. We revisit this issue further in the "future research" portion of the General Discussion.

Chapter 3

Project Two – When Preferred and Perceived Levels of Situational Strength Differ

Thus far, situational strength has been considered solely a property of situations. The present research, however, takes a novel approach. We argue that, just as there are differences across jobs in actual levels of situational strength (e.g., Meyer, Dalal, & Bonaccio, 2009) and perceptions thereof, there are differences across people in preferred levels of situational strength.

In assessing preferences for situational strength, we followed the previously-described four-facet model of situational strength. We suggest that employees will differ considerably in their preferences for each of these four facets. For example, a complete absence of situational constraints may be liberating to one employee but unnerving to another. Similarly, some employees may greatly dislike having jobs where the consequences of making errors are high, whereas other employees may be untroubled at this prospect. We predict that the factor structure for employees' preferences for situational strength will mirror the original factor structure for the situational strength items: in other words, that there will be four facets pertaining to employees' preferences for clarity, consistency, constraints and consequences.

Hypothesis 10: A four-factor model of employees' preferences for situational strength (namely, a model containing factors associated with employees' preferences for clarity, consistency, constraints and consequences) will fit the data better than several other theoretically viable alternatives.

In addition, we adapt existing theory (e.g., Deci & Ryan, 1987) to test the notion that employees will have positive reactions to more desirable forms of situational strength (which pertain to the availability and compatibility of informational cues) and negative reactions to less desirable forms (which pertain to the limits on and consequences of decisions and actions). Stated differently, we suggest that, on the whole, preferences for clarity and consistency will be higher than those for constraints or consequences.

Hypothesis 11: Employees' preferences for clarity and consistency will be higher than their preferences for constraints and consequences.

However, our major reason for assessing individual differences in employees' preferences (or "needs") for situational strength is because these preferences need not always match the perceived levels (or "supplies") of situational strength on the job. We therefore adopt a "person-environment fit" (more specifically, "person-job fit") approach to situational strength by comparing the impact of fit versus misfit in preferred and perceived levels of situational strength--and by comparing the impact of different types of misfit.

Reviews of the person-environment (P-E) fit literature (Kristof, 1996; Kristof-Brown, Zimmerman, & Johnson, 2005) suggest that the consequences of a misfit between person and environment are often deleterious. Deleterious effects have been found in terms of appraisals of the job (e.g., work stress), attitudes toward the job and organization (e.g., job satisfaction and affective organizational commitment), and behavioral intentions (e.g., turnover intentions). We therefore predict that, compared to employees who encounter a good fit between preferred and perceived levels

of on-the-job situational strength, those who encounter a misfit will exhibit higher levels of stress and job dissatisfaction as well as lower affective commitment to the organization and higher turnover intentions.

Hypothesis 12: Greater levels of misfit between preferred and perceived situational strength will be associated with higher levels of stress and job dissatisfaction as well as with lower affective commitment to the organization and higher turnover intentions.

Furthermore, consistent with the P-E fit literature (Kristof-Brown et al., 2005), we predict that all situational-strength misfits are not created equal. Employees are more likely to respond adversely (i.e., employees are more likely to report higher levels of stress and job dissatisfaction as well as lower affective commitment to the organization and higher turnover intentions) to one type of misfit than to another. The type of misfit that elicits particularly negative reactions will, we predict, differ as a function of the specific facet of situational strength. Specifically, because employees are predicted to prefer high rather than low levels of clarity and consistency, an inadequate supply (i.e., preferred level > perceived level) should elicit worse reactions than an excess supply (i.e., perceived level > preferred level). Conversely, because employees are predicted to prefer low rather than high levels of constraints and consequences, an excess supply of these facets should elicit worse reactions than an inadequate supply.

Hypothesis 13a: For the situational strength facets of clarity and consistency, an inadequate supply should elicit worse responses from employees than an excess supply.

Hypothesis 13b: For the situational strength facets of constraints and consequences, an excess supply should elicit worse responses from employees than an inadequate supply.

Method

Participants and Procedures

We surveyed 580 employees (47.1% female, 79.1% White, mean age = 48.80 years, mean job tenure = 7.69 years, mean number of hours worked per week = 40.35, median education level = completed at least some college education) across a wide variety of occupations. The sample was gathered via Syracuse University's StudyResponse Project (<http://studyresponse.syr.edu>), which was described in a previous section. Procedures were identical to those used in Phases 2 and 3 of Project One.

Materials

Situational strength. The SSW (described previously) was used to assess situational strength. Internal consistency reliability estimates were again above .85 for each facet (clarity = .94, consistency = .96, constraints = .94, consequences = .89).

Preferences for situational strength. Items regarding employees' preferences for situational strength were written to parallel each of the original situational strength items. In other words, we defined persons along the same four dimensions (clarity, consistency, constraints and consequences) as we had previously defined situations. Commensurate measurement such as this is considered desirable because it allows for persons and situations to be assessed in terms of phenomena of mutual relevance (Kristof, 1996; Tinsley, 2000). Employees responded on a 7-point scale (1 = Of no importance to you, 7 = Of utmost importance to you). Sample preferences items are as follows: "On this job, how important is it to you that you are provided with specific information about work-related responsibilities?" (preferences for clarity), "On this job, how important is it to you that different sources of work information are always consistent with each other?" (preferences for consistency), "On this job, how important is it to you that you are allowed to make your own decisions?" (preferences for constraints), and "On this job, how important is it to you that your decisions do not have extremely significant consequences for other people?" (preference for consequences). Internal consistency reliability estimates were above .90 for each facet (preferences for clarity = .95, preferences for consistency = .93, preferences for constraints = .92, preferences for consequences = .95); the preferences for constraints and consequences items were reverse-scored so that lower values represented less importance for the facet in question.

Stated differently, we used what Kristof (1996) referred to as "indirect individual-level measurement": each employee provided separate accounts of his or her perceptions of actual situational strength on the job (using the SSW) as well as his or her preferences for situational strength (using the new "preferences" items). Such a system of measurement is particularly important because "meaningful investigations of a P-E fit model require commensurate measurement of the desires and abilities of the individual, of the supplies and demands of the environment, and of the predicted outcome" (Tinsley, 2000, p. 151). We subsequently assessed the impact of person-job (mis)fit in situational strength via polynomial regression and response surface methods, which avoid the limitations of older approaches such as difference scores and profile similarity indices (see Edwards, 2007; Shanock, Baran, Gentry, Pattison, & Heggstad, 2010). In addition to measuring fit indirectly, however, we also measured it directly.

Direct assessment of fit. We measured direct perceptions of situational-strength person-job fit via a single item per facet of situational strength. The following items were used: "This job gives me just the right amount of clarity regarding my work-related responsibilities" (clarity fit), "This job gives me just the right amount of consistency between my various work-related responsibilities" (consistency fit), "This job gives me just the right amount of freedom to make my own decisions" (constraints fit), and "This job gives me just the right amount of responsibility over important outcomes" (consequences fit). Employees responded on a 7-point scale (1 = strongly disagree, 7 = strongly agree).

Criteria. Work stress ($\alpha = .65$) was measured via Stanton, Balzer, Smith, Parra, and Ironson's (2001) 15-item scale. Subjects were asked to indicate whether a series of words are indicative of their work environment by indicating either “yes”, “no”, or “?”. Examples are: “demanding” and “comfortable.” Job satisfaction ($\alpha = .80$) was measured via Judge et al.'s (2000) 5-item scale. Responses ranged from 1 (strongly disagree) to 7 (strongly agree). A sample item is: “Most days I am enthusiastic about my work.” Affective organizational commitment ($\alpha = .84$) was measured via Meyer and Allen's (1991) 6-item scale. Responses ranged from 1 (strongly agree) to 5 (strongly disagree). A sample item is: “I would be very happy to spend the rest of my career with this organization.” Turnover intentions ($\alpha = .95$) were measured via Kelloway et al.'s (1999) 4-item scale. Responses ranged from 1 (strongly disagree) to 5 (strongly agree). A sample item is: “I am thinking about leaving this organization.”

Results

Factor Structure

We predicted (Hypothesis 10) that the intended four-facet model (consisting of employee preferences for clarity, consistency, constraints and consequences) would fit the data better than several other theoretically viable alternatives. To this end, Table 10 summarizes several CFA models. Fit indices for the proposed four-facet structure were compared to a more parsimonious one-factor baseline model and other theoretically plausible alternatives in an attempt to avoid the confirmation bias (MacCallum & Austin, 2000). Two primary alternative models were tested here: (a) a two-factor model, in which items for preferences for clarity and consistency loaded on one factor while items for preferences for constraints and consequences loaded on the other, and (b) a three-factor model wherein items for preferences for clarity and consistency loaded onto a single factor (given the potential for conceptual overlap between these facets) while items for preferences for constraints and items for preferences for consequences each loaded on their own factor.

The results of these tests support Hypothesis 10, in the sense that the four-facet model demonstrates an acceptable level of congruence with the intended structure and outperforms each of the comparison models (see Table 10). Thus, the aforementioned four-facet structure was retained for the preferences items as well as the original situational strength items.

However, Table 10 contains one additional CFA model. Recall that items measuring preferences for constraints and consequences were worded such that higher scores indicated that low levels of constraints and negative consequences were important to the employee (these items were subsequently reverse-scored). In contrast, items measuring preferences for clarity and consistency were worded such that higher scores indicated that high levels of clarity and consistency were important to the employee (these items did not need to be reverse-scored). To isolate the substantive meaning of the four facets from the direction in which the items were worded, Table 10 also contains a CFA model in which the items associated with preferences for constraints and consequences loaded not only on their intended substantive factors but also on a “negatively-worded item” method factor (for an example, see Kelloway, Loughlin, Barling, & Nault, 2002). Results indicate that this model fits slightly better than the four-factor model that does not account for the direction in which items were worded. This result suggests that the fit of the four-factor model would have been slightly better

if it had been possible on conceptual grounds to word the preferences items for all four facets in the same direction.

Table 10

Preferences for Situational Strength: Confirmatory Factor Analysis Results

| Model | χ^2 | df | χ^2/df | RMSEA | CFI | TLI | SRMR |
|--------------------------------|----------|-----|-------------|-------|-----|-----|------|
| One-factor | 5966.20 | 350 | 17.04 | .17 | .52 | .48 | .15 |
| Two-factor | 4382.75 | 349 | 12.56 | .15 | .66 | .63 | .14 |
| Three-factor | 2209.51 | 347 | 6.37 | .10 | .84 | .83 | .07 |
| Four-factor | 1583.87 | 344 | 4.60 | .08 | .89 | .88 | .05 |
| Four-factor with method factor | 1388.00 | 331 | 4.19 | .08 | .91 | .90 | .04 |

Note. The four-factor model represents the predicted structure, wherein each item loads on the intended factor and all factors are allowed to correlate. The one-factor model is a standard comparison suggested by Thompson (2000). The two-factor models represent theoretically viable alternatives wherein items for preferences for clarity and consistency load on one factor, while items for preferences for constraints and consequences load on a second factor (Deci & Ryan, 1987). The three-factor models represent theoretically viable alternatives wherein items for preferences for clarity and consistency load on one factor, while items for preferences for constraints and items for preferences for consequences load on their own factors. The four-factor with method factor model is one in which the items associated with preferences for constraints and consequences load not only on their intended substantive factors but also on a “negatively-worded item” method factor. RMSEA = root mean square error of approximation; CFI = confirmatory fit index; TLI = Tucker-Lewis index; SRMR = standardized root mean square residual.

Table 11 contains the latent (i.e., from the CFA models) inter-correlations between preferences for each of the four situational strength facets.

Table 11

Latent (Factor) Inter-Correlations Between Facets of Preferences for Situational Strength

| | Preferences for Clarity | Preferences for Consistency | Preferences for Constraints | Preferences for Consequences |
|------------------------------|-------------------------|-----------------------------|-----------------------------|------------------------------|
| Preferences for Clarity | (.95) | .78* | .32* | .44* |
| Preferences for Consistency | .78* | (.93) | .49* | .50* |
| Preferences for Constraints | .34* | .51* | (.92) | .30* |
| Preferences for Consequences | .43* | .50* | .34* | (.95)* |

* $p < .05$

Note. On the diagonal, values (in parentheses) represent internal consistency reliability estimates. Values below the diagonal represent the latent (i.e., factor) inter-correlations from the four-factor model, whereas values above the diagonal represent the corresponding inter-correlations from the four-factor with method factor model. All significance tests are two-tailed.

Mean Differences

As seen in Table 12, mean levels of preferences for clarity and consistency were higher than those for preferences for constraints and consequences (after reverse-scoring the latter two so that, in all cases, higher scores indicated preferences for more situational strength). Moreover, the 95% confidence intervals for the former two facets of situational strength did not overlap with those for the latter two facets. Thus, the results supported the prediction (Hypothesis 11) that employees' preferences for clarity and consistency are higher than their preferences for constraints and consequences.

Table 12

Preferences for Situational Strength: Descriptive Statistics and Correlations with Perceived Situational Strength

| Facet | Mean (SD) ^a | 95% Confidence Interval (LB, UB) ^a | Cronbach's α | Correlations with Perceived Situational Strength | | | |
|------------------------------|---------------------------|--|---------------------|--|-------------|-------------|--------------|
| | | | | Clarity | Consistency | Constraints | Consequences |
| Preferences for Clarity | 5.22 (1.24) | (5.12, 5.32) | 0.95 | 0.45* | 0.34* | 0.13* | 0.33* |
| Preferences for Consistency | 5.08 (1.10) | (4.99, 5.17) | 0.93 | 0.39* | 0.38* | 0.14* | 0.39* |
| Preferences for Constraints | 2.90 (1.07) | (2.82, 2.99) | 0.92 | -0.16* | -0.19* | 0.03 | -0.20* |
| Preferences for Consequences | 3.61 (1.39) | (3.50, 3.72) | 0.95 | -0.26* | -0.30* | -0.28* | -0.33* |

* $p < 0.05$

^aOn a 1 - 7 scale, where lower numbers indicate a preference for weak situations and higher numbers indicate a preference for strong situations.

Note. SD = Standard Deviation, LB = Lower Bound of 95% Confidence Interval, UB = Upper Bound of 95% Confidence Interval.

Person-Job Fit

Hypothesis 12, which is concerned with the impact of person-job fit (versus misfit) in situational strength, was assessed in two ways: (1) via direct, perceptual measures of fit, and (2) via analysis of indirect, actual measures of fit through polynomial regression and response surfaces (Edwards, 2007; Shanock et al., 2010). Hypothesis 13, which is concerned with the differential

impacts of the two types of misfit (inadequate versus excess supplies), cannot be assessed via the former approach, and consequently was assessed solely via the latter approach.

Direct fit. Table 13 includes correlations between each facet of direct person-job situational strength fit, on the one hand, and each criterion variable (job stress, job satisfaction, affective commitment, and turnover intentions) on the other hand. Results indicate that all the criterion variables except job stress were well predicted by all direct fit perceptions. Thus, in the case of direct fit perceptions, Hypothesis 12--which stated that greater levels of misfit between preferred and perceived situational strength are associated with higher levels of work stress and turnover intentions as well as with lower levels of job satisfaction and affective commitment--was supported for all criteria except work stress.

Table 13

Correlations Between Direct Fit Perceptions and Relevant Criteria

| Facet of Direct Person-Job Situational Strength Misfit | Work Stress | Job Satisfaction | Affective Commitment | Turnover Intentions |
|---|-------------|------------------|----------------------|---------------------|
| Clarity Misfit | .09* | -.45* | -.37* | .30* |
| Consistency Misfit | .06 | -.57* | -.44* | .35* |
| Constraints Misfit | .09* | -.53* | -.39* | .31* |
| Consequences Misfit | .07 | -.55* | -.45* | .35* |

* $p < .05$

Note. Due to listwise deletion of missing data, N varies between 577 and 579.

Indirect fit. For each facet of situational strength (clarity, consistency, constraints and consequences) and its associated preferences, and for each criterion/outcome of interest (work stress, job satisfaction, affective organizational commitment, and turnover intentions), we analyzed the following polynomial regression equation model:

$$Z = b_0 + b_1X + b_2Y + b_3X^2 + b_4XY + b_5Y^2$$

In the above model, Z is the criterion variable, X is a facet of situational strength, Y is employees' preferences for that same facet of situational strength, and b is the unstandardized regression coefficient. It should be noted that, although the regression coefficients in the above model are unstandardized, we z-scored the X and Y variables prior to running the model in order to reduce

multicollinearity and consequently aid in interpretation (cf. Shanock et al., 2010.) Then, two parameters, a_3 and a_4 , are calculated as follows:

$$a_3 = b_1 - b_2$$

and

$$a_4 = b_3 - b_4 + b_5$$

Parameters a_1 and a_2 are not of theoretical interest here, and therefore will not be discussed.

Parameter a_4 can be interpreted as the degree of misfit. This parameter allows us to assess whether the extent to which outcomes are deleterious differs as a function of the amount (degree) of discrepancy between preferred and perceived situational strength. Thus, parameter a_4 allows us to test Hypothesis 12.

Parameter a_3 can be interpreted as the direction of misfit. This parameter allows us to compare the extent to which outcomes are deleterious as a function of whether preferred or perceived situational strength is greater--in other words, whether an inadequate supply of situational strength is more or less detrimental than an excess supply. Thus, parameter a_3 allows us to test Hypothesis 13a and 13b.

Tests of hypotheses are contained in Tables 14-17. Hypothesis 12 suggested that employees will respond more adversely to situational-strength misfit, per se, than to situational-strength fit--and that responses should become more adverse as misfit increases. Operationally, this meant that parameter a_4 should be significantly negative for job satisfaction and affective commitment, and significantly positive for work stress and turnover intentions. Results indicated that parameter a_4 was typically non-significant. Therefore, in the case of indirect fit, Hypothesis 12 was not supported.

Hypothesis 13 compared the two types of misfit: an inadequate supply of situational strength versus an excess supply. Hypothesis 13a suggested that, for the situational strength facets of clarity and consistency, an inadequate supply would be more detrimental than an excess supply. Operationally, this meant that parameter a_3 should be significantly positive for job satisfaction and affective commitment, and significantly negative for work stress and turnover intentions. Results (see Tables 14 and 15) indicated full support for the hypothesis.

Figure 3 displays a sample response surface in which affective organizational commitment is displayed as a function of the situational strength facet of clarity and employees' preferences for clarity. The figure shows that, contrary to Hypothesis 12, misfit between perceived and preferred clarity is not associated with significantly lower affective commitment than fit--as evidenced by the fact that the a_4 parameter is not significantly negative and the response surface is not markedly concave. However, in support of Hypothesis 13a, the figure also shows that the a_3 parameter is significantly positive--as evidenced by the fact that an inadequate supply of situational strength (i.e., preferences for clarity > perceived clarity) is associated with much lower affective commitment than an excess supply (i.e., perceived clarity > preferences for clarity).

Hypothesis 13b suggested that, for the situational strength facets of constraints and consequences, an excess supply would be more detrimental than an inadequate supply. Operationally, this meant that parameter a_3 should be significantly negative for job satisfaction and affective commitment, and significantly positive for work stress and turnover intentions. Results (see Tables 16 and 17) indicate that the hypothesis was generally supported for constraints (results were always in the expected direction, and were statistically significant for three of the four criteria), but not for consequences (results were in the expected direction for two of the four criteria, and only one of these effects was statistically significant).

Table 14

Hypothesis Tests Associated with Person-Job Fit for the Situational Strength Facet of Clarity

| Hypothesis | <i>A Priori</i> Expectation | Criterion Variable | | | |
|--------------------------------------|---|--------------------|------------------|----------------------|---------------------|
| | | Work Stress | Job Satisfaction | Affective Commitment | Turnover Intentions |
| 12 (Misfit worse than Fit) | Parameter a_4 is negative for job satisfaction and affective commitment, and positive for work stress and turnover intentions | -0.01 | 0.05 | -0.05 | -0.19* |
| 13a (Asymmetric effect of Misfit) | Parameter a_3 is positive for job satisfaction and affective commitment, and negative for work stress and turnover intentions | -0.07* | 0.64* | 0.41* | -0.54* |

* $p < 0.05$

Note. Numbers in the top row (for Hypothesis 12) are parameter a_4 values. Numbers in the bottom row (for Hypothesis 13a) are parameter a_3 values. The polynomial regression equation model is $Z = b_0 + b_1X + b_2Y + b_3X^2 + b_4XY + b_5Y^2$ (where Z = the criterion variable, X = clarity, Y = preferences for clarity, and b = unstandardized regression coefficient). Then, a_3 and a_4 (the impact of the direction and degree of discrepancy misfit, respectively) are calculated as follows: $a_3 = b_1 - b_2$ and $a_4 = b_3 - b_4 + b_5$.

Table 15

Hypothesis Tests Associated with Person-Job Fit for the Situational Strength Facet of Consistency

| Hypothesis | <i>A Priori</i> Expectation | Criterion Variable | | | |
|--------------------------------------|---|--------------------|------------------|----------------------|---------------------|
| | | Work Stress | Job Satisfaction | Affective Commitment | Turnover Intentions |
| 12 (Misfit worse than Fit) | Parameter a_4 is negative for job satisfaction and affective commitment, and positive for work stress and turnover intentions | -0.04 | 0.18* | 0.01 | -0.07 |
| 13a (Asymmetric effect of Misfit) | Parameter a_3 is positive for job satisfaction and affective commitment, and negative for work stress and turnover intentions | -0.08* | 0.46* | 0.20* | -0.25* |

* $p < 0.05$

Note. Numbers in the top row (for Hypothesis 12) are parameter a_4 values. Numbers in the bottom row (for Hypothesis 13a) are parameter a_3 values. The polynomial regression equation model is $Z = b_0 + b_1X + b_2Y + b_3X^2 + b_4XY + b_5Y^2$ (where Z = the criterion variable, X = consistency, Y = preferences for consistency, and b = unstandardized regression coefficient). Then, a_3 and a_4 (the impact of the direction and degree of misfit, respectively) are calculated as follows: $a_3 = b_1 - b_2$ and $a_4 = b_3 - b_4 + b_5$.

Table 16

Hypothesis Tests Associated with Person-Job Fit for the Situational Strength Facet of Constraints

| Hypothesis | <i>A Priori</i> Expectation | Criterion Variable | | | |
|--------------------------------------|---|--------------------|------------------|----------------------|---------------------|
| | | Work Stress | Job Satisfaction | Affective Commitment | Turnover Intentions |
| 12 (Misfit worse than Fit) | Parameter a_4 is negative for job satisfaction and affective commitment, and positive for work stress and turnover intentions | -0.03 | 0.11 | -0.05 | -0.79* |
| 13b (Asymmetric effect of Misfit) | Parameter a_3 is negative for job satisfaction and affective commitment, and positive for work stress and turnover intentions | 0.12* | -0.34* | -0.09 | 0.52* |

* $p < 0.05$

Note. Numbers in the top row (for Hypothesis 12) are parameter a_4 values. Numbers in the bottom row (for Hypothesis 13b) are parameter a_3 values. The polynomial regression equation model is $Z = b_0 + b_1X + b_2Y + b_3X^2 + b_4XY + b_5Y^2$ (where Z = the criterion variable, X = constraints, Y = preferences for constraints, and b = unstandardized regression coefficient). Then, a_3 and a_4 (the impact of the direction and degree of misfit, respectively) are calculated as follows: $a_3 = b_1 - b_2$ and $a_4 = b_3 - b_4 + b_5$.

Table 17

Hypothesis Tests Associated with Person-Job Fit for the Situational Strength Facet of Consequences

| Hypothesis | <i>A Priori</i> Expectation | Criterion Variable | | | |
|--------------------------------------|---|--------------------|------------------|----------------------|---------------------|
| | | Work Stress | Job Satisfaction | Affective Commitment | Turnover Intentions |
| 12 (Misfit worse than Fit) | Parameter a_4 is negative for job satisfaction and affective commitment, and positive for work stress and turnover intentions | -0.01 | 0.09 | 0.00 | 0.04 |
| 13b (Asymmetric effect of Misfit) | Parameter a_3 is negative for job satisfaction and affective commitment, and positive for work stress and turnover intentions | 0.09* | 0.07 | 0.07 | 0.13 |

* $p < 0.05$

Note. Numbers in the top row (for Hypothesis 12) are parameter a_4 values. Numbers in the bottom row (for Hypothesis 13b) are parameter a_3 values. The polynomial regression equation model is $Z = b_0 + b_1X + b_2Y + b_3X^2 + b_4XY + b_5Y^2$ (where Z = the criterion variable, X = consequences, Y = preferences for consequences, and b = unstandardized regression coefficient). Then, a_3 and a_4 (the impact of the direction and degree of misfit, respectively) are calculated as follows: $a_3 = b_1 - b_2$ and $a_4 = b_3 - b_4 + b_5$.

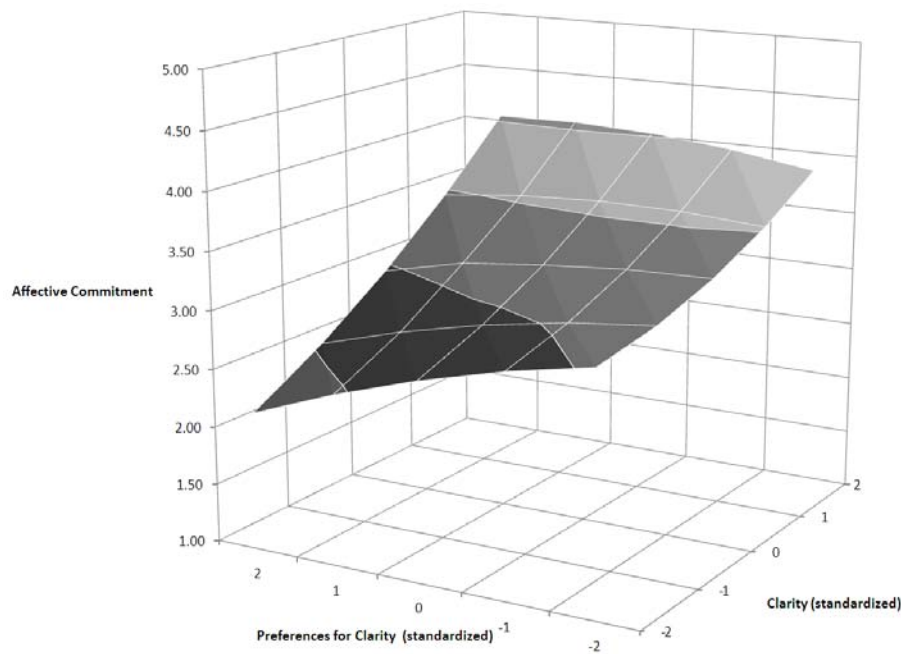


Figure 3. Response surface for affective organizational commitment as a function of perceived and preferred levels of the situational strength facet of clarity.

Discussion for Project Two

The current project took research on situational strength in an entirely new direction by assessing individual differences in preferences for situational strength. The juxtaposition of preferred and perceived levels of situational strength allowed for a comparison of instances where preferred and perceived situational strength were well or poorly matched. The literature on person-environment fit (e.g., Kristof-Brown et al., 2005) suggests that mismatches/misfits between employees' needs and environmental supplies are often associated with deleterious consequences. Consequently, we examined whether misfits between preferred and perceived situational strength were associated with higher stress and intent to quit, and lower satisfaction and commitment. We also compared the impacts of the two types of misfit: inadequate supplies versus excess supplies.

Results suggested equivocal support for the hypothesis that misfit would be associated with worse consequences than fit. This hypothesis was supported when the extent of fit was measured directly, via a perceptual measure of the fit between preferred and actual situational strength, but not when it was measured indirectly, via separate assessments of preferred and perceived situational strength that were subsequently subjected to polynomial regression and response surface analysis. These results are not particularly surprising: a meta-analysis by Yang, Levine, Smith, Ispas, and Rossi (2008) suggests that the three non-linear terms in the polynomial regression model (here: the squared situational strength term, the squared preferences term, and the interaction between perceived and preferred strength)--all of which are needed for the computation of parameter a_4 , and consequently for the comparison of fit and misfit--have tended to make vanishingly small contributions to explained variance in extant research. In other words, according to Yang et al., extant research using the polynomial regression approach has tended to better support a "person + environment" (i.e., main-effects) model than a "person x environment" (i.e., interactive) model.

Nonetheless, results using the indirect measure of fit did distinguish between the two types of misfit. With the exception of the consequences facet of situational strength, results supported the contention (Hypothesis 13) that an inadequate supply of situational strength would be more detrimental than an excess supply for desirable facets of situational strength, but would be less detrimental for undesirable facets of situational strength.

Chapter 4

General Discussion

Our current research included two projects that, collectively, advanced knowledge regarding situational strength and, more generally, the impact of situations on human behavior. Although the general idea underlying situational strength has been an important part of social science thinking for nearly a century (related ideas were proposed long before the first formal articulation by Mischel, 1968), and although situational strength has been posited to be the single most important situational force (Snyder & Ickes, 1985), the construct was very poorly understood and operationalized until recently. The current research built on a newly-developed, theoretically-based taxonomy (Meyer et al., 2010) by developing and validating measures of perceived and preferred situational strength. These new measures afforded the opportunity to begin to test fundamental questions regarding the extent to which situations interact with personality in determining voluntary work behavior (Project One) and the extent to which people respond adversely to mismatches between their preferred situations and their perceptions of the actual situations they encounter (Project Two). Moreover, this research provides the foundation for a wide variety of important research projects concerning situational strength (as described in the subsequent section entitled “Future Research” section) and provides considerable implications for the Army (as described in the subsequent section entitled “Relevance to the U.S. Army”). We begin, however, with a brief description of the limitations of our current work.

Limitations

Some might argue that the findings in these two research projects may be affected by common method bias (i.e., that parameter estimates may be inflated due to the fact that all data were collected via self-report). However, various lines of research suggest that common method variance (CMV) can only *attenuate* interaction effects (e.g., Evans, 1985; Siemsen, Roth, & Oliveira, 2010). Indeed, after conceptually and empirically analyzing the effects of CMV, Siemsen et al. concluded (p. 470) that:

empirical researchers should not be criticized for CMV if the main purpose of their study is to establish interaction effects. On the contrary, finding significant interaction effects despite the influence of CMV in the data set should be taken as strong evidence that an interaction exists.

Given that the prediction and detection of person-situation interactions was the primary focus of both of the current projects (and that there is no reason to believe that CMV would artificially inflate estimates of convergent validity while simultaneously deflating estimates of discriminant validity), we argue that the nature of the data used here does not substantively alter our conclusions. Moreover, especially when survey respondents are aware that their data are confidential and that the researchers are unconnected with management in the organization (e.g., Aquino, Galperin, & Bennett, 2004)--both of which were the case for the present data--self-reports may actually be the best way of assessing undesirable behavior such as counterproductive work behavior. Because undesirable behavior is frequently performed in a private and unobservable manner, supervisors have little opportunity to detect its occurrence; consequently, supervisor-reports of such behavior are likely to be

severely contaminated by halo error (Dalal, 2005; O'Brien & Allen, 2008; Sackett, Berry, Wiemann, & Laczko, 2006; Spector & Fox, 2002).

Another purported limitation is that the cross-sectional designs used in the current projects preclude strict causal conclusions. Our arguments did follow conventional wisdom in organizational research (i.e., that personality and situations are antecedents to behavior), but we agree that the research questions of interest to us would benefit from longitudinal research designs. Indeed, we intend to conduct such research in the future (see subsequent section).

Future Research

We envisage the proposed studies as the foundation of a program of both basic and applied research that actively attempts to help situational strength develop from an amorphous general concept and organizational truism (Cooper & Withey, 2009) into a well-defined and well-articulated area of research. Below, we provide a few illustrative examples.

In our view, it will be important for future research to assess the impact of situational strength at various points along the causal *process* by which personality traits are translated into motivational states and, ultimately, task performance. We intend to conduct such research. Existing theoretical and empirical work (Judge & Ilies, 2002; Locke & Latham, 2002, 2004; Parker & Ohly, 2008) suggests that personal goals (both goal-setting and goal-striving) are important motivational mediators of the personality-performance relationship. We propose to examine two potential entry points for situational strength. The first hypothesized impact of situational strength is a main effect on motivational states. Specifically, strong situations are likely to lead to increased goal-setting and goal-striving. For example, situations involving serious performance-related consequences provide employees with external incentives to set, and subsequently strive toward, stringent performance-related goals. The second hypothesized impact is a moderating effect, such that strong situations attenuate the impact of personality on motivational states. For example, in situations involving serious performance-related consequences, we predict that virtually all employees--regardless of their dispositional inclinations--are likely to set and strive toward performance-related goals. However, in situations involving minimal performance-related consequences, we predict that only those employees who are dispositionally inclined to set and strive toward goals will do so. The proposed research therefore answers Locke and Latham's (2004) call for researchers to examine: (a) the process by which general (i.e., dispositional/trait) motivational constructs influence job performance via situationally-specific motivational states, and (b) the manner in which these trait→state→performance processes are moderated by situational factors such as situational strength. The proposed research would ideally be longitudinal in order to explicate temporal trait→state→performance relationships.

Another possibility is to investigate within-person changes in the momentary experience of situational strength. This could be accomplished via ecological momentary assessments (e.g., Dalal, Lam, Weiss, Welch, & Hulin, 2009) of situational strength volatility over small time-units such as hours or days for the same person in the same job. This line of research would allow researchers to better understand the influence of external forces on the moment-to-moment fluctuations in performance. For instance, situational strength theory posits that weakening the situation by providing employees with information that directly contradicts previous information will encourage employees

to fall back on their own dispositional proclivities, thereby interfering with previous behavior-homogenization efforts such as training programs and formal procedures. Thus, understanding how momentary fluctuations in situational strength influence behavior has the potential to improve the ways in which information and expectations are transmitted, understood, and managed in modern organizations.

A third area for future research is instigated by a combination of our general interest in employees' preferences for situational strength (Project Two) and our specific finding (Project One) that the criterion-related validity of conscientiousness and agreeableness on counterproductive work behavior is, contrary to theoretical expectations, stronger in strong situations and weaker in weak situations. This finding has important implications for the Army's ongoing efforts to identify and assign high-quality personnel because, among some types of people, counterproductive or deviant behavior may occur in those situations where other forms of job performance are high. Stated differently, many military environments may create a "double-edged sword" by simultaneously encouraging both positive and negative behaviors. Future research should attempt to understand why this occurs, so that selection, training and motivation systems can be designed to maximize positive behavior while minimizing negative behavior. Concepts that may help explain this effect have a long history in the field of psychology. For example, "psychological reactance theory" (Brehm, 1966; Brehm & Brehm, 1981) posits that perceived threats to one's freedom will lead to a motivational state that is intended to restore freedom. We predict that the presence of situational strength--especially more situational strength than desired by the employee (see Project Two)--increases psychological reactance, and that it does so to a greater extent among those with an organizationally detrimental trait profile (e.g., unconscientious or disagreeable individuals), thereby encouraging the negative behavioral outcomes that are associated with reactance. Thus, this suggestion for future research represents a theoretically grounded extension of consistent, unexpected, and interesting results from our current research.

We also note that the impact of situational strength should extend to constructs beyond personality. For example, situational strength is likely to influence the predictive validity of job attitudes such as job satisfaction (Judge, Hulin, & Dalal, in press) and employee engagement (Dalal, Baysinger, Brummel, & LeBreton, under review; Dalal, Brummel, Wee, & Thomas, 2008). Preliminary evidence for this proposition comes from two sources. First, job attitudes are themselves influenced by personality (Judge et al., in press; see also Credé, Chernyshenko, Stark, Dalal, & Bashshur, 2007). In other words, job attitudes themselves have a substantial dispositional component (see also Arvey, Bouchard, Segal, & Abraham, 1989; Staw & Ross, 1985). Second, theoretical and empirical research (Judge, Thoresen, Bono, & Patton, 2001; see also Herman, 1973; Smith, 1977) suggests that job attitudes are related to job performance more strongly in situations wherein employees experience autonomy and exhibit control over their actions than in situations wherein they do not, and more strongly in situations wherein the consequences of their actions are weak than in situations wherein the consequences are strong. As discussed previously, autonomy, control, and consequences are all ideas associated with situational strength. Thus, future research should systematically investigate whether situational strength moderates the relationship between job attitudes and job performance. In an Army context, the implication would be that Soldiers' job attitudes are becoming more important predictors of their performance as the typical Army situation "weakens."

An important large-scale applied research project would involve the estimation of situational strength for a variety of individual MOSs. These estimates could then be made publicly available through an online database similar to O*NET (the Occupational Information Network; <http://online.onetcenter.org>). Such a database would allow researchers and practitioners to improve human resources systems in the Army by more accurately assessing the likely validity of non-cognitive predictors (see Johnson et al., 2010, for arguments in support of such a system), and by better estimating the likelihood of deleterious outcomes based on situational-strength misfit. For example, selecting Soldiers on the basis of non-cognitive predictors may be more conducive to performance in some MOSs than others. The online database would then be updated at systematic intervals (e.g., every decade) in order to track within-MOS temporal changes in situational strength as the Army continues to change in response to changes in its mission. For example, selecting Soldiers on the basis of non-cognitive predictors may become more or less important over time within the same MOS.

In addition, several basic and applied research projects could be generated by assessing situational strength in non-work settings, given that personality is implicated in numerous types of non-work behavior (Ozer & Benet-Martínez, 2006)--and given that early discussions of situational strength (e.g., Mischel, 1977) were in the context of the impact of personality on behavior in general, not just behavior in work organizations. As an example, personality has been shown to predict health-related behavior such as those pertaining to smoking, diet and exercise (Ozer & Benet-Martínez, 2006). Research could thus assess the situational strength of smoking-cessation or weight-loss programs. “Strong” programs (e.g., those with severe constraints) should engender low inter-individual variation in outcomes (such as success in quitting smoking) as well as weak personality-outcome correlations. In contrast, “weak” programs should engender higher inter-individual variation in outcomes as well as stronger personality-outcome correlations.

Relevance to the U.S. Army

“The security environment in which our Soldiers will operate is becoming increasingly uncertain and unpredictable” (Harvey & Schoomaker, 2007, p. 2)

The construct of situational strength has profound implications for the U.S. Army because, according to recent statements about the changing nature of the Army’s role and structure, Soldiers are operating in environments that are more ambiguous and fluid, and that require more personal discretion, than has historically been the case. For example, as described in the 2007 Army Posture Statement and the 2006 Quadrennial Defense Review Report (Harvey & Schoomaker, 2007; U.S. Department of Defense, 2006), the 21st century security environment is likely to be one of unpredictability and uncertainty, with the Army facing irregular, novel and complex environments that often involve non-state actors who adopt unconventional methods. In a related vein, Sager, Russell, Campbell, and Ford (2005) noted specifically that future Soldiers will be operating in an environment that generally requires greater independent learning, less reliance on others for task performance, greater task variety, and greater needs for self-management. In addition, Soldiers must now confront more potentially conflicting objectives than in the past. For example, Soldiers must minimize civilian casualties in the process of finding and neutralizing adversaries who deliberately blend in among civilian populations. Similarly, Soldiers who are well-suited for warfare must also be

well-suited for the increasing number of humanitarian and reconstruction operations they must now perform (Ellsworth, 2006).

These new challenges are motivating an Army-wide (i.e., systems-level) emphasis on Soldier adaptability, flexibility, and uncertainty management. Stated differently, current and anticipated future Army situations are much “weaker” than those experienced traditionally—and the Army as a whole is re-orienting to reflect this decrease in situational strength.

Of the numerous Basic Research Areas of Interest to which the current research is relevant, the Army’s increasing need to “select, classify, train, and develop Soldiers and leaders who...adapt quickly to novel missions such as negotiations, operational environments, and a wide spectrum of cultures” (BRO-BAA, p. 1) suggests that Human Resources is the most pertinent. Consistent with the hypotheses outlined in this research, we believe that the primary implications of situational strength for the Army’s Human Resources processes are that this construct can be used to: (a) predict and understand important situational fluctuations in the criterion-related validity coefficients for various non-cognitive predictors, and (b) predict and understand the effects of situational strength misfit on various outcomes. The former has implications for Soldier selection and assignment, whereas the latter has implications for Soldier well-being and retention. Specific implications for these human resources sub-areas are discussed below.

Soldier selection and assignment. The implications of situational strength on Soldier selection and assignment are at least two-fold. First, inherent to the idea of situational strength is the proposition that the criterion-related validity coefficients for non-cognitive predictors will not be uniform across MOSs, because the amount of situational strength that is typically experienced is likely to vary as a function of specific duties and circumstances. For example, the Civil Affairs Specialists are much more likely to operate in weak situations wherein Soldiers are required to take direct action under conditions of extreme ambiguity, compared to MOSs such as the Financial Management Technicians, which are more indicative of strong situations because policies and procedures typically dictate appropriate behaviors. Despite the changing nature of the Army (discussed next), differences across MOSs in terms of situational strength are likely to remain or even be exacerbated, and the current research offers an understanding of how and why these differences will affect the validity of non-cognitive predictors. Thus, the basic research examined via Project One leads directly to a line of applied research dedicated to quantifying the nature and practical impact of situational strength on the validity of non-cognitive predictors of Soldier performance.

Second, according to the concept of situational strength, the criterion-related validity coefficients for non-cognitive predictors will be higher today than they were when typical Army situations were stronger. This phenomenon highlights the continued need for the improved measurement and conceptualization of Soldiers’ dispositions. In the past, a Soldier’s unique profile of dispositions theoretically had less of an effect because Soldiers were more likely to act on clear and specific guidelines passed to them through a formal chain of command. In the modern Army, however, Soldiers are expected to adapt to ambiguous situations and to manage uncertainty. Situational strength theory predicts that it is in these situations that individual discretion, decision-making ability, and affective stability will matter most. Screening for dispositional characteristics such as personality and trait affect is, therefore, likely to be more important as the Army continues to

undergo changes that essentially weaken the situations that Soldiers typically experience. The Army is actively exploring the use of non-cognitive predictors for selection and classification (e.g., Knapp & Tremble, 2007). Thus, the current research serves as external confirmation for the usefulness of this endeavor, and provides a theoretical and empirical basis for more accurately estimating criterion-related validities.

Soldier well-being and retention. Moving away from the predictive validity of various non-cognitive predictors, it is also important to note that a misfit in the amount of situational strength desired by incoming Soldiers, compared to the amount of situational strength that is typically present in the modern Army, can lead to job dissatisfaction, psychological strain, and intent to quit (or not re-enlist). Thus, the basic research examined via Project Two leads directly to a line of applied research dedicated to understanding the effects of situational strength misfit on outcomes such as Soldier dissatisfaction and attrition by (re-)classifying Soldiers into MOSs that are a better fit with their needs.

Connections to additional Basic Research Areas of Interest. In addition to its relevance to the Human Resources category, the present research has connections to additional basic research areas of interest to the Army. One such area is Social Systems. Specifically, the present research is relevant to the impact of changing Army missions on military performance and personnel retention. Another such area is Affect and Emotions. Research (Dalal, 2005; Spector & Fox, 2002) has demonstrated that job performance is predicted by characteristic (i.e., habitual) patterns of affectivity. In particular, counterproductive work behavior is predicted by trait negative affect (NA), whereas organizational citizenship behavior is predicted by trait positive affect (PA). Situational strength may therefore moderate the criterion-related validities of trait NA and PA, such that the validities are higher in weak situations than in strong situations.

Conclusion

We believe that the frequency with which the situational strength construct is cited and utilized speaks to its ubiquity as a meaningful force in work organizations (and beyond). Yet, the construct has thus far lacked the theoretical development necessary to test and apply its effects in a comprehensive manner. The two projects in this research aimed to begin addressing this lacuna, thereby laying the groundwork for subsequent programs of basic and applied research dedicated to thoroughly understanding, applying, and benefiting from the effects of this important situational construct.

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